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Latinos in a Changing Society

Part II

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Editor's Note

Padraig O'Malley

This issue of the *New England Journal of Public Policy* is devoted to further consideration of the public policy implications of specific topics that are of concern to the Latino community and in need of urgent redress. This must be a priority if the United States is not to find itself hopelessly mired in the ramifications, blithely ignored at the end of the twentieth century, of the complexities the changing ethnic composition of the country will create in the opening decades of the twenty-first century.

Latinos presently account for approximately 22 million, or 8 percent, of the U.S. population. The increasing migration from Mexico, the Caribbean, and Central and South America, and the high birthrate among immigrants in particular and Latinos in general, make the Latino population the fastest-growing minority group in the United States. Most estimates project that by the year 2050, one in every five people in the country will be Hispanic. Add to the population crucible the projected increases in the number of Afro-Americans and the exponentially increasing inflow of Asians and other nonwhite nationalities, and the result will be a true potpourri of skin tones in which color blindness will have become a malady of the truly blind.

Part I of *Latinos in a Changing Society*, which appeared in our Spring/Summer 1995 edition, addressed questions relating to immigration, employment, and income and participation in the political process. In his Foreword, Dr. Edwin Meléndez, director of the Mauricio Gastón Institute for Latino Community Development and Public Policy at the University of Massachusetts Boston, observed:

For many . . . ethnic conflict is part of an assimilation or integration process that in time will reach a more promising stage of tolerance and understanding. . . . For others, understanding how Latinos contribute to the landscape of America has not yet worked its way into their consciousness, partly because of their so-called invisibility between blacks and whites. The presence of Latinos is propitious in that their legacy will mark economic, political, and social changes into the next century. As Carlos Fuentes expressed it, America will find itself shifting toward the "Latinoization" of its own borders.

Thus, he concludes, "[Latinos] may well be on their way to becoming the agents of change in fostering America's future."

Padraig O'Malley is a senior fellow at the John W. McCormack Institute of Public Affairs, University of Massachusetts Boston.

This audacious prediction is a suitably appropriate starting point for Part II of *Latinos in a Changing Society*. It addresses questions of identity and ethnicity and how the subtleties and psychological nuances embedded in these concepts and the ways they play themselves out in practice. Matters relating to education and health, for example, are symptomatic of cultural differences that are ignored by policymakers, exacerbating rather than ameliorating the problems Latinos face.

Indeed, if self-awareness is the key to self-understanding, societal awareness of the cultural imperatives that are germane to the Latino sense of identity is the key to societal understanding of the dynamics of Latino behavior and its social appurtenances. Linked, of course, to the Latino sense of self-identity is the changing status of ethnicity and the role it plays in American society.

Once used almost exclusively to define the causes of ethnic conflict and inter- or intraregional strife in far-off places, ethnicity was viewed as something of an anachronism, a throwback to tribalism, something quite out of place in a modern society. It was perceived in terms of its being like a bad habit, one which could be broken by application of sufficient will. It was something people could grow out of as their propensity to modernize became more ingrained and the influence of mass culture — the “filthy tide,” as W. B. Yeats once referred to it — subsumed indigenous differences and stamped us all with the same brand name.

We were all members of the global family, inexorably destined to become clones of one another in terms of our participation in the global marketplace, where seemingly archaic concepts such as the social implications of different cultural values and the folk memories of heritage and history are consigned to the trash bins of history. In our rush to become modern, we lost sight of our own uniqueness, dismissing as premodern (or should I “up” the intellectual notch and say postmodern?) the very things that are the birthright of our humanness.

Whereas in the first part of the twentieth century the industrial credo emphasized mass production and standardization in the marketplace of goods and services, in the latter part of the century we are bringing the same rigid dispositions to compartmentalize human relationships, the social interactions that define personal behavior and our “place” in society.

We are “measured” in terms of generalized social norms that have their origins in the predominant Anglo/Western value systems that often have little more to commend them besides the fact of their being accoutrements of the dominant — read “ruling” — classes. Hence they come with the imprimatur of what amounts to secular theology’s own sense of infallibility.

Thus, the appeal of Buchananism, the political ideology articulated by Republican presidential candidate Patrick Buchanan, who rails against immigrants (“Americans for American jobs”); uses xenophobia as a vehicle to denigrate values that do not conform to his own tunnel-visioned idea of the American dream; champions white nationalism (“Who speaks for the Euro-Americans?”) to reach the “anxious” classes, the millions of white Americans who feel threatened by the impact inexorable social change is having on their lives, job insecurity, and the fear that hordes of foreigners are massing on the country’s borders ready to claim the meager fruits of their economic orchards at a fraction of the wages American employees currently enjoy. For these millions, “values” are a code word for the exclusion of people of color or others who by virtue of race and nationality are seen as a clear and present danger. Fortress America, a concept as futile as it is simplistic, is becoming the preferred solution.

In “Understanding Latino Ethnic Identity Development,” Dr. Azara Rivera-Santiago notes that “the steady growth in the [Latino] population has necessitated extended

research that is more reflective of cultural perspectives which are different from the typical Western view of the world or the majority culture. This is particularly true of the literature on identity development.” In addition, Dr. C. H. Hoare, writing in the *Journal of Counseling and Development*, observes that “the values of American society of autonomy and independence foster an identity that is individualistic. In particular, American individualism and self-centrality help us to understand the American idea of the person. They do not, however, propel us toward understanding the way in which identity may be differentially constituted in other cultures.”

Most important, the connection between culture (customs, language, values, beliefs, etc.) and ethnic identity is not sufficiently appreciated. Or, to put it somewhat differently, the values of American society with their almost pathological emphasis on the individual don’t help us to understand how other cultures, which do not put a premium on the individual as the fulcrum that balances the universe, work.

On the other hand, one must be careful to distinguish between ethnic identity and cultural affinity. The latter is a necessary but insufficient ingredient of the former. The complexities inherent to the understanding of each add to the need for caution in interpretation. When we tread the mine-filled fields of ethnicity, with all the loaded connotations associated with the term and the equal proclivity with which policymakers and practitioners use and abuse its implicit racial content for whatever pretext serves the convenience of the moment, we need to guard against the off-the-cuff generalizations that impede rather than advance understanding of its relevance to defining the framework for public policy in the next century.

In her examination of models of ethnic identity development, Rivera-Santiago identifies the features that are common to all. At the early stages of the developmental process, “all share the common belief that an individual shows preference for the values of the dominant culture and society”; in the “search” stage, however, “[all] suggest that individuals undergo a search for a better understanding of their culture and themselves.” One other conclusion of research in this field, which is still in its embryonic stage, is that in environments where there is less tolerance for cultural differences, “preference for identifying with [one’s] ethnic group becomes more meaningful.” Intolerance, it seems, creates a longing for the safety of the tribal womb.

Central to the idea of a more elastic definition of ethnicity is the need to ascertain how ethnic groups, such as Latinos, especially in a bicultural society, view themselves rather than how they are viewed by others, to fashion public policy according to their assessment of their needs rather than our assessment of what they must do or achieve in order to become part of the so-called mainstream, to recognize difference rather than to minimize it.

The importance of socioeconomic and political factors on the development of ethnic identity is a recurring theme in the recent literature on the subject, particularly with regard to the way in which inequities in areas such as education and employment can play a significant role in identity development.

Only recently have we acknowledged the obvious: that ethnicity reflects different cultural values; that these differences, rather than being compressed into the false dichotomies of some ill-conceived, poorly designed, and disastrously executed processes of what have invariably turned out to be models of nonintegrative assimilation, the failure of which manages simultaneously to be one of the most transparent yet concealed secrets of our times, *must* become the foundation stone for an edifice of multiculturalism, its many stories connected by stairwells of self-esteem, each step on the stairwells a tentative venture into the promised land of self-empowerment. ♪

Foreword

Martha Montero-Sieburth, Ed.D.

Ralph Rivera, Ph.D.

Education and health, linked to ethnicity, will have a significant effect on the future well-being of Latinos residing in the United States. Not only do these sectors raise monumental concerns, but the solutions proposed by policymakers, educators, and community members are equally complex.

Educating U.S. Latinos is a compelling paradoxical issue. While their sheer numbers in elementary and secondary schools have expanded dramatically, their enrollment in postsecondary education is at an all-time high, and their access to graduate programs at the master's and doctoral levels shows steady gains, Latinos — not necessarily just the poor but those of the middle class as well — have the highest dropout rates of any ethnic group in the United States.¹

In fact, the current status of Latino youths' educational attainment poses a national threat.² With the large numbers of Latino high school dropouts, including students from high-income families, a massive uneducated labor force is being created which will have the costly consequence of widening the education gap between Latinos, blacks, and whites.³ Thus, according to the prediction of Maria Puente and Sandra Sanchez, while the Latino population is projected to increase by 61 percent in the next fifteen years, its dropout rate is expected to be twice as high as that of blacks and more than three times that of whites.⁴

Moreover, there are growing concerns as to whether access to preschool programs such as Head Start has long-term benefits lasting through elementary, middle, and high schools. Head Start evaluations indicate that middle-class children derive the most benefit from such programs, and that they provide limited coverage for underserved children. Many Latino parents appear to have lingering doubts concerning the quality of their children's education at every level of schooling. Research addressing the questions and explanations to guide policymakers in enacting changes still has to be undertaken. Some questions relate to retention and advancement of Latino students at different levels, how tracking affects entry into higher-level courses, whether high school completion is affirmation that the goals of school-to-work programs have been realized, and whether higher education and graduate studies indeed advance the careers of Latinos.

The health concerns are obvious: how to provide basic health care to Latinos, many of whom are poor, do not speak English, are culturally different, are new immigrants

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to the United States, and need adequate health and preventive services. The task can be overwhelming. While Latinos must receive suitable health care, health care providers must be educated about the needs of Latinos and their communities. They must be taught the cultural niceties that allow patient and doctor to communicate openly about illnesses and how best to treat them. Medical institutions and staff, in attempting to satisfy different clientele in hospital and community settings, focus their teaching on issues of diversity and ethnicity.⁵ The ethnicity of patients and their families plays a significant role in determining the types of health care they can expect to receive and the types of services providers can deliver and support.

Just as the ongoing national debate about health care centers on matters of ethnicity, future students will have to concern themselves with receiving an appropriate education, one hewn from the current educational reform movement to introduce more meaningful actions.

The overlapping interests of education and health point to the difficulty in identifying single solutions for the problems and issues they present. Another level of analysis is needed to explain the impact on Latinos of the education and health intersection. For instance, education can be viewed as both part of the problem and part of the solution in addressing the significant disparities in Latinos' health status. Latino children are disproportionately at risk of dropping out of high school. Most urban public school systems are in crisis, and their programs have had a limited influence on the attrition rate of Latino students. Schools, which are potentially a valuable resource for enhancing the health status of Latino students, can play a vital role in preventing high-risk behavior. They reduce adverse health conditions through such interventions as comprehensive school-based clinics, health education programs, and special health curricula.

Another important finding that influences the relation of education to health can be found in the medical literature. Less educated people are significantly more prone to higher mortality and morbidity rates than those who have a college education. For example, a recent report from the U.S. Department of Health and Human Services found that among people between twenty-five and sixty-four years old, the death rate of those with less than a high school education was more than twice that of those who attended college for at least one year.⁶ Clearly, such a low level of educational achievement does not bode well for Latinos' health. Therefore, it is apparent that the interdependence of health and education as it affects Latinos requires a deeper analysis of the issues than that supported by traditional research results. In fact, it demands, above all, sensitivity to and understanding of the changing status of ethnicity in each of these areas.

The Changing Status of Ethnicity

A closer look at the changing status of ethnicity aids in understanding its particular role in America. Latinos increasingly describe themselves in terms of ethnicity rather than race. "Racial ethnic labels are used in the United States as code words for behavioral patterns associated with poverty, destitution, and deviant/criminal behavior," says Martha Gimenez.⁷ In many cases, the word *Latino* has replaced the word *Hispanic*. According to Gimenez, "Hispanics are not a minority group in the historical sense of the concept but an extraordinarily heterogeneous population whose members differ in terms of nationality, race, ethnicity, culture, socioeconomic status, and social class."⁸

For example, ethnicity, once categorized solely by race, now incorporates class and culture. Latinos are represented through a myriad of self-definitions and characterizations.

In fact, a current panethnicity movement blurs the once-strict definitions of Latinos. Felix Padilla and Jose Calderón speak to the creation of a panethnic identity based not on a transplanted cultural heritage but on situational and collective action that transcends distinct national and cultural identities.⁹ The social categories of race are being subsumed under the category of “borders” so that ethnicity becomes prominent in its relation to identity and self-esteem. Even when they have limited or no knowledge of their first language and culture, Latinos proudly self-identify in terms of their heritage. Joshua Fishman aptly pointed out in his studies of New York communities that ethnicity may well outlive the loss of language.¹⁰

Yet as important as ethnicity may be, Latino heterogeneity, says Gimenez, rather than being taken at face value, is overshadowed. What emerges is a racelike character still subject to stereotyping and discrimination. Even though the most successful Latinos appear to be exceptions to the rule, their good fortune is attributed to their having “overcome their Hispanicness” and assimilated into the mainstream.¹¹ Understanding such complexities requires ascertaining how Latinos view themselves rather than how they are viewed by others, and more important, how their differences are recognized rather than minimized. It is not surprising then that modern Latinos focus on identity — ethnicity, culture, and language — in socioeconomic, political, education, and health issues.

Education

Without a doubt, Latino education is inextricably tied to issues of ethnicity, degree and visibility of ethnic group representation among other groups, and distribution of equitable educational services for all students. Educators and policymakers recognize the ethnicity of their students and families — and their growing numbers — as criteria for providing equitable programs. Some go as far as trying to locate a fit between the culture of a student and the culture of his or her school. Hence, compensatory programs such as Head Start and bilingual and special education classes are targeted at Latino students and viewed as vehicles that prepare them to compete with their white mainstream counterparts.

The underlying premise in such thinking is that given the opportunity, Latino students should not only do well in school, but through the competencies gained there successfully meet prescribed academic standards. The leveling of the playing field toward achieving parity is assumed to be inherent in the delivery of educational programs. Such assumptions fail to examine the structural and systemic obstacles Latino students face, the day-to-day experiences they share, their constant exposure to discriminatory practices, and their low status, all of which reinforce their sense of failure.¹²

An overall view of the Latino experience in education shows indices of advancement in postsecondary and higher education. However, data indicate that at the high school level, there is retrenchment attributable to inadequate learning opportunities and systemic discrimination.¹³ Similarly, it is widely assumed that Latinos, like any other students, should simply be treated as kids. The truth is that this philosophy, lacking a special approach to or concern for their cultural and linguistic attributes, disregards the importance of such influences on lives of Latino youngsters. This generalized color-blind criterion tends to set them up for failure. On the one hand, their ethnicity may be recognized in terms of relative numbers to necessary resources, but on the other hand, their unique conditions for learning — as foreign language speakers from a primary culture not yet assimilated into the secondary culture — are not seriously taken into account.

In this dilemma, close examination of the factors that engage or disengage students in and out of school reveals that solutions require multilevel and multilayered analyses.

There are no easy answers to these situations, but clearly the shift that has taken place in explaining Latinos through models of cultural deprivation and deficit to the more systemic questioning of how schools and health care agencies respond to their specific needs has begun to ground Latinos' experiences within a larger framework. We can no longer ignore the presence of Latinos and their fundamental contributions to the United States. As present and future citizens, they are shaping the discourse that must be developed in each of these areas.

For example, if Latino families are to play more than perfunctory roles in determining school policy, parents must receive training in decision-making processes leading to their development as productive members of school councils. Empowering Latino parents is fast emerging as a guarantee that effective learning is a top priority. Networks of parents, teachers, students, and administrators are widening as parents mobilize and communities demand better education for their students. The interface between schools, communities, and homes is narrowing and becoming, as John Ogbu argued, continuous rather than discontinuous.¹⁴

The research of Moll and others has also demonstrated that within Latino communities there are funds of knowledge which have not necessarily been identified, tapped, or utilized by schools.¹⁵ Thus, what appear to be directives for educating Latinos are no longer prescriptions for success. The focus has shifted from explaining why Latinos can't succeed to providing detailed maps of their roads to success and influence. The conditions under which Latinos learn — school structures, curricula, teacher preparation, role models — are at the center of such analyses.

Health

The nation's health care delivery system faces complex challenges. For the past decade or so, U.S. health care costs have been rising significantly faster than other sectors of the economy, yet 37 million people lack health insurance and another 22 million have inadequate coverage. Access to quality medical care in many urban centers and rural areas has been lacking, and long-term-care coverage is meager. Moreover, health consumers and medical providers alike have been baffled by unreasonable and excessive paperwork and bureaucracy. Owing primarily to these factors, health care reform is a social policy area that has received significant attention during President Clinton's administration.

While the recent interest in health care reform seemed to offer a timely opportunity to address Latinos' problems in accessing health services, and the reasons for Latinos' poor health, the debate centered on cost containment and financing. By and large, the discussions overlooked such critical issues as language, geographic and institutional barriers, and the paucity of Latino health professionals and culturally competent services, which affect the ability of Latinos to obtain adequate health care services.

While they are disproportionately represented among the nation's uninsured and underinsured, Latinos are severely underrepresented in health policymaking and medical occupations. The scarcity of Latinos in health research positions results in a shortage of well-documented research on this population.¹⁶ The limitations of national data sets on Latino mortality and morbidity trends was even noted by the Government Accounting Office.¹⁷ These factors contribute significantly to a poor understanding of Latino health

needs and problems, which hinders the development of adequate programs and services. They also result in limited knowledge of the effect of health policy on Latinos.

It is essential, therefore, that health officials and policymakers engage Latino health providers and researchers in discussions about improving access and health care delivery services to Latinos. It is important to seek mechanisms through which Latino health professionals can participate actively in and influence the identification of priority Latino health issues and develop solutions to the population's health problems.

Our purpose in making the linkages of each of these areas in Part II of Latinos in a Changing Society, which afford continuity from Part I and expand on some of the social and cultural dimensions, corresponds to the vision of what Latinos face and will continue to face into the next century.

Latino Contributions to the Discourse

The articles on ethnicity, education, and health afford an opportunity to examine these subjects in relation to their effects on the lives of Latinos. They also provide discussions of family, higher education, and health issues, which are generally unavailable in mainstream literature. While the education issues presented here have implications for elementary and secondary schools, the focus on such effects in higher education is purposeful. We know more about Latino students' elementary school experiences than about secondary and postsecondary experiences, particularly in terms of the culture conflicts and academic socialization that occur at higher levels.

Azara Rivera-Santiago reviews Latino ethnic identity as defined and studied within the social sciences and surveys some of the more recent work on ethnic identity development models proposed by researchers in the field of psychology. Rivera-Santiago also discusses the generalizability of such reviews across ethnic groups and offers a series of dimensions that have to be considered in studying Latino ethnic identity development. She provides a case study of mental health to elaborate on the themes presented.

The study by Yolanda Padilla is revealing in regard to the feedback effect of poverty and overall family background on the educational attainment of young Latinos. She finds that a father's income and education, along with other family resources, strongly influence years of schooling completed. However, the various social contexts that generations of Latinos have confronted seems to make an important difference. After controlling for social origins, other factors, such as social-psychological attributes, cognitive ability, and timing of immigration, have a significant effect on young Latinos' education. These differences in social environment seem to be responsible for intergenerational differences in socioeconomic outcomes. Second-generation Latinos achieve greater educational success than their immigrant parents, but third generations show a marked lack of progress in comparison with that of their parents.

A critical element in educational progress is the responsiveness of the educational system itself to the particular cultural and language needs of Latinos. Raimundo Mora offers an in-depth look at literacy in science for Latino students as a case study of how institutions respond to these needs. In his opinion, lack of English proficiency and failure to use students' background knowledge are major impediments to progress in the sciences. He recommends that language and educational proficiency be considered when assessing bilingual Latino students and designing their curricula and that their social background and conditions be taken into account.

Latinos who have progressed through the educational system and achieved doctorates face serious institutional barriers and discrimination. In "Beyond Affirmative Action: An Inquiry into the Experiences of Latinas in Academia," Martha Montero-Sieburth documents the ordeals in education and the barriers within the academic structures that work against the development of Latina academicians. She highlights not only the obstacles represented by the demands of mainstream research and education, but also within-Latino group differences that circumvent their academic advancement. Her analysis points out that many Latina academics are forced into the role of "ethnic" professor serving "ethnic" students. These Latinas, often expected to symbolize all Latinos, are limited to providing information about Latino communities. The result is a group of academics who feel isolated, unrecognized for their professional contributions, and frustrated. In the end, they do not advance through university structures. Therefore true reform of higher education requires the development of new paradigms in which Latinas themselves design and implement institutional responses to meet their needs.

Katherine Donato and Roger Wojtkiewicz offer an overview of the educational achievement of Puerto Rican high school students in the United States by contrasting the experiences of Puerto Ricans vis-à-vis other ethnic groups. Controlling for family background and ethnic status, and using longitudinal data, they find that Puerto Ricans have the lowest high school graduation rates. Moreover, they are less likely than whites to complete high school. The authors conclude that the educational disadvantage of Puerto Ricans is unique. Even if they assumed the attributes of whites, their high school graduation rates would remain lower than those of whites and blacks. This calls for a mandate for innovative public policy and research to account for their unusual handicap and investigate the quality of the schools Puerto Ricans attend as well as the stability of their families.

The articles on health make a valuable contribution to the body of knowledge about Latino health and to this dialogue. Effective interventions require appropriate conceptual models specifically designed to address the Latino reality. The article by Ester Shapiro presents a detailed examination of the literature and conceptual frameworks in a critical area of intervention with Latino families. Shapiro argues that the fields of prevention and early intervention are "plagued by fragmentation and lack of cultural sensitivity in cultural frameworks, research approaches, and models of service delivery," and states that an integrative model of family development in a cultural context produces a better "organizing conceptual framework for designing, providing, and evaluating prevention and early intervention services to Latino families."

"Puerto Ricans' Access to U.S. Health Care," by Ralph Rivera, covers Puerto Rican underutilization of health care as measured between the years 1982 and 1984 by the Hispanic Health and Nutrition Examination Survey of the National Center for Health Statistics. The findings from regression analysis indicate that gender, language, health insurance, and regular source of care, as well as state of health, are significant predictors of Puerto Ricans' latest health care visit. Several salient revelations are made: Puerto Rican women are more likely than men to consult a physician; older adult Puerto Ricans between the ages of fifty-five and sixty-four are more likely to seek care than those between the ages of nineteen and fifty-four and over sixty-five. Moreover, as the English language proficiency of Puerto Ricans increases, so does the recency of their last visit to a health facility. The same is true among those who perceive a decline in their health. Finally, the study indicates that having a regular source of health care is the strongest predictor of Puerto Rican usage.

Janis Barry Figueroa offers a concrete example of the inauspicious effect of poor health on job performance and, by implication, productivity and earnings. Using data from the Panel Survey of Income Dynamics, she finds strong evidence their poor health affects the participation in the labor force and the hourly earnings of Latinos in comparison with white and black women. Barry Figueroa concludes that Latinos' high rates of poverty are directly responsible for these outcomes.

The connection between poverty and poor health is further explored by Annette Ramírez de Arrellano, who attributes U.S. Puerto Ricans' premature death rates to social conditions. She argues that health care reform may not suffice to correct the leading causes of premature death, namely, HIV infections, homicides, accidents, heart disease, and malignant neoplasms. Among the risk factors associated with the five leading causes of years of potential life lost are unprotected sex, illegal drug use, alcohol abuse, access to firearms, tobacco consumption, inadequate diet and exercise, stress, and inadequate health screenings. While Puerto Ricans can benefit from greater and more equitable access to services, there is undeniably a need for a broader individual and group strategy to attempt to eliminate the leading causes of their years of potential life lost.

These articles echo the issues of today that will have an impact on the future and help us understand how current thinking about ethnicity, education, and health within Latino populations presents opportunities for the coming century. The Latino presence in the United States will certainly make itself known. As Richard Rodriguez poignantly reminds us, "We will change America, even as we will be changed."¹⁸

Notes

1. M. Puente and S. Sanchez, "Experts Call Education Gap National Threat," *USA Today*, September 9, 1995.
2. The U.S. Bureau of the Census estimates that by the year 2000, nearly one-third of the entire school-age population (five- to twenty-four-year-olds) will be nonwhite or Hispanic. *The Road to College: Educational Progress by Race and Ethnicity*, a joint publication of the Western Interstate Commission for Higher Education and the College Board (Boulder, Colo., 1991). Furthermore, by the end of this century, about 40 percent of the nation's workforce will consist of immigrants who arrived after 1980. The Population Reference Bureau projects that about half of all Americans will be Hispanic, Asian, or black by the year 2080 if trends continue. "A Difference of Degree: State Initiatives to Improve Minority Students' Achievement" (Denver, Colo.: State Higher Education Executive Officers Association, 1987), 17.
3. Puente and Sanchez, "Experts Call Education Gap National Threat."
4. Ibid.
5. See, for example, the legacy of the Harvard Medical School New Pathway program, begun in 1989, in which students use experiential learning as the basis of their analyses of the case method, and their science courses are complemented by courses in patient-doctor relationships. In 1994–1995, the school introduced a community-based patient-doctor course for first-year medical students, which in 1996 will be expanded to include other medical students.
6. *Health and the United States*, U.S. Department of Health and Human Services, 1994.

7. M. Gimenez, "U.S. Ethnic Politics: Implications for Latin Americans," in *The Politics of Ethnic Construction: Hispanic, Chicano, Latino? Latin American Perspectives* 19, no. 4 (Fall 1992): 12.
8. Ibid., 10.
9. See F. Padilla, *Latino Ethnic Consciousness: The Case of Mexican Americans and Puerto Ricans in Chicago* (Notre Dame: University of Notre Dame Press, 1985), and J. Calderón, "Hispanic and Latino: The Viability of Categories for Panethnic Unity," in *The Politics of Ethnic Construction*, 37–44.
10. J. Fishman, "Bilingual Education in the United States under Ethnic Community Auspices," in J. Alatis, ed., *Georgetown University Round Table on Languages and Linguistics 1980: Current Issues in Bilingual Education* (Washington, D.C.: Georgetown University Press, 1980), 8–13.
11. Gimenez, "U.S. Ethnic Politics."
12. See R. Rivera and S. Nieto, *The Education of Latino Students in Massachusetts: Issues, Research and Policy Implications* (Boston: Mauricio Gastón Institute for Latino Community Development and Public Policy, University of Massachusetts Boston, 1993), for an extensive analysis of some of these issues, particularly tracking, discriminatory practices, and dropout rates and measures for success of Latinos.
13. In Massachusetts, where, in 1988, there were 55,275 Latinos out of a total number of 825,409 students, in 1990, 48 percent of the Latinos had not received a high school diploma; more than half the Latinos under the age of eighteen had an income below the poverty level, with those younger than eleven being the most affected. Moreover, the annual Latino student dropout rates of 15.2 percent in 1986–1987 and 14.4 percent in 1987–1988 were more than three times the rates for white students in both those years. N. E. Wheelock, *The Status of Latino Students in Massachusetts Public Schools: Directions for Policy Research in the 1990s* (Boston: Mauricio Gastón Institute for Latino Community Development and Public Policy, University of Massachusetts Boston, 1990), 10.
14. J. Ogbu, "Cultural Continuities and Schooling," *Anthropology and Education Quarterly* 13, no. 4: 290–307.
15. L. Moll, "Bilingual Classroom Studies and Community Analysis: Some Recent Trends," *Educational Researcher* 21, no. 2 (March 1992): 20–24.
16. See, for example, H. Amaro, "Health Data on Hispanic Women: Methodological Limitations," *Proceedings of the 1993 Public Health Conference on Records and Statistics*, National Center for Health Statistics, 1993; H. Amaro, *Testimony on the Disadvantaged Minority Health Improvement Act*, U.S. Senate Committee on Labor and Human Resources, Washington, D.C., June 30, 1993; J. Delgado and L. Estrada, "Improving Data Collection Strategies," *Public Health Reports* 108, no. 5 (1993): 540–545; National Council of La Raza, "Improving Hispanic Health Status," *Agenda Supplement* 11, no. 2 (Winter 1993); National Hispanic Health Policy Summit, "Summary of Discussions and Recommendations in Assessing Hispanic Health Needs," draft, April 8, 1992; and Surgeon General's National Hispanic/Latino Health Initiative, *One Voice, One Vision: Recommendations to the Surgeon General to Improve Hispanic/Latino Health*, U.S. Department of Health and Human Services, June 1993.
17. General Accounting Office, *Hispanic Access to Health Care: Significant Gaps Exist* (Washington, D.C.: U.S. Government Printing Office, 1992).
18. R. Rodriguez, "The Fear of Losing a Culture," *Time*, July 11, 1988, 84.

Understanding Latino Ethnic Identity Development

A Review of Relevant Issues

Azara Rivera-Santiago, Ph.D.

One of the most promising areas in cross-cultural psychology is the development of identity among various ethnic groups in the United States. This article has a twofold purpose. First, it offers the concept of ethnic identity as defined and studied within the social sciences — sociology, anthropology, and psychology — including a review of some of the recent work on ethnic identity development proposed by leading investigators in the field of psychology. The author discusses their generalizability across ethnic groups. Second, it presents a number of dimensions considered important in conceptualizing and studying Hispanic ethnic identity development. These include acculturation, the notion of biculturalism, and gender and generational differences. Implications for mental health practitioners and recommendations in the area of public policy are discussed.

One of the most promising areas of study in cross-cultural psychology is the development of identity among various ethnic groups.¹ This interest in ethnicity is prompted by the significant increase in the number of ethnic minorities in the United States. Of particular importance is the rapidly growing number of Latinos — approximately 22 million, or 8 percent of the population. Moreover, the substantial migration from Mexico, the Caribbean, and Central and South America, and the high birth rate of this group, make the Latino population the fastest-growing minority group. It is estimated that by the year 2050 one in every five persons will be Hispanic.²

The steady growth in the population has necessitated extended research that is more reflective of cultural perspectives which are different from the typical Western view of the world or the majority culture. This is particularly true of the literature on identity development. Hoare points out that the values of American society of autonomy and independence foster an identity that is individualistic.³ In particular, she states, “American individualism and self-centrality help us to understand the American idea of the person. They do not, however, propel us toward understanding the way in which identity may be differentially constituted in other cultures.”⁴ Furthermore, Bernal and Knight have cogently stated that it is necessary to broaden our perspectives on how cultural factors such as customs, language, and values influence the development of ethnic identity.⁵

The purpose of this article is to present a number of ethnic identity development models proposed by leading investigators in the field of psychology and to discuss their

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“It is important to conceptualize Latino ethnic identity and its development as complex and dynamic, involving many factors. Specifically, a variety of socioeconomic and political factors that may have an impact on the development of ethnic identity are often overlooked in the psychological literature.... Also, within this socioeconomic and political context, there are inequities in education and employment opportunities that play a significant role in the identity development of Latino youth.”

— Azara Rivera-Santiago

relevance to Latinos. I introduce and describe a variety of dimensions such as the process of acculturation, biculturalism, gender, and generational differences that should be considered in conceptualizing Latino ethnic identity development.

Before I elaborate on Latino identity development issues, several points bear mentioning regarding “ethnic identity” as conceptualized and studied within the social sciences (sociology, anthropology, and psychology). First, there are differences in the way it has been defined. For example, Tajfel offers an often cited definition stemming from a “social” identity perspective: “That part of an individual’s self-concept which derives from his knowledge of his membership of a social group together with the value and emotional significance attached to membership.”⁶ Interestingly, Ferdman distinguished cultural identity from ethnic identity by describing it as an individual’s perception of the behaviors, beliefs, values, and norms characteristic of the ethnic group to which one belongs.⁷ On the other hand, researchers have proposed that ethnic identity is multidimensional, consisting of “self-identification” — the label individuals give themselves — knowledge about the culture including customs, values, beliefs, and traits, and the feelings and attitudes individuals have about their group membership.⁸ Likewise, Rogler, Cooney, and Ortiz considered the concept of ethnic identity in terms of language use and ability, subjective affiliation with particular cultural values, and attitudinal preference for the given culture.⁹ García proposed that “ethnicity” consisted of three distinct components: ethnic consciousness (awareness and expression of specific cultural behaviors); ethnic identification (cultural group membership or association with a given ethnic group); and identity (self-identifier or self-label).¹⁰

Second, ethnic identity has been conceptualized as a developmental phenomenon stemming from the work of Erikson, who proposed a theory of ego identity formation.¹¹ He postulated that individuals achieve an identity as a result of experiencing a crisis, exploring one’s role, and making commitments in such areas as occupation and religion. Phinney speculated that ethnic identity may indeed parallel that of Erikson’s concept of ego identity, particularly since culture is implicated in its formation.¹²

Finally, ethnic identity has been studied from a variety of disciplines with differing definitions, methodological approaches, and ethnic populations, offering little in the way of cross-cultural comparisons or generalizability of findings.¹³ Nonetheless, there is considerable agreement that ethnic identity is an important aspect of psychological functioning and that it is a major part of an ethnic individual’s personality.¹⁴

Ethnic Identity Development

It has been suggested that ethnic identity is a complex dynamic process that changes over time.¹⁵ Within the psychological literature, a number of models regarding the development of ethnic identity have been proposed. For instance, Cross developed a four-stage model of black identity that contributes to the formation of specific racial identity attitudes and is a precursor of many of the more recent models.¹⁶ According to Cross, the four stages are: (1) preencounter, in which blacks deny their culture and value the dominant society (white culture); (2) encounter, in which a situation occurs that pushes the individual to question and reexamine old ways of thinking and behaving. In this stage, a search for black identity is coupled with feelings of guilt and anger with the dominant society; (3) immersion/emersion, in which there is a full commitment to black culture. The individual pulls away from the values held by the dominant culture and is often characterized as having little tolerance for white society; and (4) internalization, viewed

as the final stage of development, involving the resolution of conflicts with the dominant culture. Individuals achieve a sense of balance between beliefs about their own culture and the dominant culture.

More recently, Helms developed a six-stage racial identity model for whites in which racial attitudes toward blacks and other ethnic groups can be examined.¹⁷ Briefly, the stages are: (1) contact, conceptualized as lacking awareness of racial differences; (2) disintegration, defined as a state of confusion resulting from knowing that one belongs to a white racial group that perhaps has a history of discriminating against other ethnic groups; (3) reintegration, considered a stage in which there is a sense of superiority over other racial groups; (4) pseudoindependence, characterized by a superficial acceptance of members of other racial groups; (5) immersion/emersion, viewed as involving a deeper understanding about what it means to be white; and (6) autonomy, a stage of complete acceptance of both strengths and weaknesses of white society, including culture and group membership.

Although these models have broadened our understanding of the dynamics involved in the identity formation as it relates to contact with whites (Cross model) or blacks (Helms model), the various stages as outlined cannot be generalized across all ethnic groups. In response to this issue, Atkinson, Morten, and Sue integrated the various perspectives of earlier models and proposed a five-stage Racial/Cultural Identity Development Model (R/CID) that can be applied to a variety of ethnic groups (Asians, blacks, Latinos, and native peoples).¹⁸

This model consists of five distinct stages: (1) conformity, characterized as a preference for the values of the dominant culture and society; (2) dissonance, viewed as a gradual reexamination of the attitudes and beliefs held by the dominant culture and society. This reexamination often takes place after some experience has occurred, leading to questioning old beliefs and ways of behaving; (3) resistance and immersion, defined as a rejection of the dominant culture. In this stage an individual may have intense feelings of anger resulting from the knowledge that he or she is a member of a group that has experienced oppression and discrimination, combined with a sense of pride in the person's own cultural and racial group; (4) introspection, characterized as a stage involving a deeper understanding of the racial/ethnic group to which one belongs, as well as of other minority groups. This stage also involves some degree of conflict as one struggles with the desire to be loyal to the group, at the same time wanting independence and autonomy; (5) integrative awareness, the last stage, viewed as achieving a balance and a sense of security.¹⁹ This comes about after the individual is able to accept aspects of his or her culture and those of the dominant culture that are both appealing and beneficial. With this new perspective comes a real appreciation for cultural differences. In this stage, there is a deliberate attempt to work toward eliminating oppression.

A fourth model, developed by Jean Phinney, is one of the first to elaborate on an ethnic identity model for adolescents and young adults, which can also be applied across ethnic groups (e.g., Africans, Asians, Hispanics, and whites).²⁰ Specifically, her model is a three-stage process based on the theoretical formulations proposed by Erikson and incorporates many of concepts and ideas mentioned in the models described above.²¹ In the first stage, called unexamined ethnic identity, an individual unquestionably accepts the values and attitudes of the dominant culture.

According to Phinney, a person may have a preference for the values, beliefs, and behaviors of the dominant society, but that is not viewed as an absolute necessity as elucidated by Cross and others. In other words, an individual can be totally unaware of

having a preference for these values and behaviors. In the second stage, known as the ethnic identity search or moratorium, the individual begins to explore his or her ethnic identity after a profound and meaningful experience. It is sometimes considered an emotional stage as a person undergoes a search to understand oneself and the culture. The third and final stage, ethnic identity achievement, is characterized as an “internalized sense of ethnic self” and confidence about who one is. A sense of security is combined with positive feelings about the self and others.

Phinney points out that initial studies with Mexicans, Asians, and African ethnic groups show promising results supporting the stage model.²² According to her, adolescents move from stage to stage. She further speculates that individuals may, in fact, continue achieving stages higher than those illustrated in the model.

A number of studies exploring the relationship between the three-stage model and psychological measures of self-esteem and adjustment show promising results. In one survey, Phinney and Alipuria found that among a sample of college students, the correlations between self-esteem and ethnic identity were higher for Asian, black, and Mexican students than for the white students.²³ In another study, Phinney studied the relationship between ethnic identity and various factors associated with psychological adjustment among a sample of tenth-grade students.²⁴

Specifically, she found that students with an “achieved ethnic identity” had stronger social (peer) and family relations and exhibited more self-confidence and control as compared with those in the early stages of development. In sum, these studies clearly demonstrate that for adolescents and young adults, a strong sense of who one is in relation to ethnic group membership is associated with healthier psychological functioning. Equally important, a unique feature of Phinney and her colleagues’ work is that the model has been successful in studying ethnic identity across minority groups from a developmental perspective. More recently, the Multigroup Ethnic Identity Measure has been developed; it consists of three scales: positive ethnic attitudes and sense of belonging, ethnic identity achievement, and cultural practices referred to as ethnic behaviors. Overall reliability coefficients range from .71 to .90.²⁵

Several points regarding these models bear mentioning. First, there is considerable overlap in some of these stages. For example, in the stages of conformity,²⁶ pre-encounter,²⁷ and unexamined ethnic identity,²⁸ all share the common belief that an individual shows a preference for the values of the dominant culture and society. Moreover, the immersion/emersion stage²⁹ and resistance and immersion stage³⁰ are similar to the ethnic identity search stage proposed by Phinney.³¹ In this stage, all three models suggest that individuals undergo a search for a better understanding of their culture and themselves. Second, there are age differences in the populations on which these models are based. Phinney’s work has focused on minority youth, whereas the other models describe ethnic identity for adult populations. Finally, considerable importance has been given to these models because they help mental health professionals become more sensitive to the attitudes and behaviors of minority clients who seek counseling or therapy.³² From a broad perspective, these models provide valuable frameworks useful in the development of effective intervention programs for ethnic minorities. Although these frameworks have increased our understanding of the dynamics involved in ethnic identity development, Sue and Sue have argued that a number of limitations should be considered.³³ A primary concern is that they suggest that ethnic identity development is a linear process and occurs in one direction. They have contended that for the R/CID model in particular, some individuals may skip stages while others may actually move back to earlier stages

of development. A second issue concerns their relevance to recent immigrant groups. For example, Sue and Sue speculated that many recent immigrant groups (Asians) have strong attitudes and beliefs about their culture on arrival in the United States. If the immigrant encounters a negative experience, such as discrimination or racism, which forces the individual to reexamine identity, it is not clear where that person would fit in the model. A question they raise is whether the immigrant would begin at the conformity stage (a denigration of one's culture and complete acceptance of the dominant culture) and move to subsequent stages as a result of a negative experience. Another issue is the fact that they do not consider possible gender and class differences among ethnic populations. A final concern is that only a few studies have examined ethnic identity in relation to generations of immigrants.³⁴ This is particularly important for Latinos, given the recent increase in the number of immigrants arriving in the United States from Central and South America.

Latino Identity Development: Toward an Integrative Model

While the literature reviewed here shows that more attention has been given to ethnic and cultural backgrounds as important factors in identity development, one of the major limitations of this research is the continued belief that the process and progression from one stage to another is uniform. Perhaps at a basic level it may be appropriate to look at identity formation as a common phenomenon for all humans, but when exploring its relationship with psychological adjustment, the approach might be to examine specific dimensions of ethnic identity. This is particularly important when dealing with Latino populations. It is widely acknowledged that Latinos are a diverse group of people. Included in this broad category are Mexicans, Puerto Ricans, Cubans, and Central and South Americans. Latinos not only represent a variety of racial and cultural backgrounds, but also differ in such factors as ancestry, migration history, and cultural traditions, values, and practices. Equally important, these groups differ in the type and quality of contact with the United States.

When one is conceptualizing ethnic identity development for the Latino in the United States, it is proposed that consideration be given to a more integrative approach, which includes the following dimensions:

Acculturation

It is widely recognized that acculturation plays an important role in the psychological adjustment of Latinos. Marín has defined it as "a process of attitudinal and behavioral change undergone by individuals who reside in multicultural societies . . . or who come in contact with a new culture due to colonization, invasion or other important political changes."³⁵ Marín further speculates that acculturation not only affects the degree to which individuals adhere to certain cultural values and practices, but that it is also a dynamic and lifelong process

Of particular interest is the contention that the acculturation process can influence a person's ethnic identity. For example, when examining self-identification as a component of ethnic character, Marín reports that the process of acculturation was significantly related to the way Mexican-Americans identified themselves on the Hispanic Health and Nutrition Examination Survey.³⁶ In fact, he found that as they acculturated, there was movement toward self-identification as a "biethnic."

From a different angle, Estrada examined changes in socioeconomic status, an indicator of acculturation, in relation to ethnic identification.³⁷ Specifically, he developed three hypotheses, each proposing a change in ethnic identity as a result of economic mobility: (1) with an increase in socioeconomic status, Latinos tend to identify with the dominant culture and refer to themselves as “white”; (2) with an increase in socioeconomic status, Latinos develop a stronger identification with their culture, which is demonstrated in a sense of pride transmitted to their children; and (3) Latino ethnic identity of parents and children is clearly demarcated at the highest and lowest levels of socioeconomic status and less defined at midlevel. Although these various hypotheses have not been tested, Estrada’s perspectives suggest that to obtain a better understanding of the dynamics of acculturation as it pertains to ethnic identity, one must examine it in the context of social and economic mobility.

Biculturalism

Also related to ethnic identity is the concept of biculturalism. Rotheram-Borus and others have defined it as a multidimensional concept in which there is a “unique blending of two cultures,” suggesting that biculturalism is also tied to the process of acculturation.³⁸ For example, a dimension of biculturalism might be the degree to which individuals use and preserve the Spanish language. Within the process of acculturation, it may be possible to maintain certain cultural values and norms such as the significance of familism (obligation to and support from relatives) while losing the ability to speak fluent Spanish. Thus, the degree to which individuals adhere to certain cultural values and beliefs, and the degree of bilingualism, could be considered separate aspects of biculturalism.

Much of the current research on identity development in relation to biculturalism has focused on adolescents. Studies conducted by Rotheram-Borus show that the way in which minority youth self-identify (i.e., “bicultural,” “mainstream,” or “ethnically identified”) depends on the communities in which they attend school.³⁹ In these studies, black, Asian, and Mexican adolescents from an integrated school were asked to self-identify using these terms. These adolescents were compared with a similar sample of minority youth from a nearby school, which was considered to experience more racial tension among the student body and was less integrated. Interestingly, they found that a significant percentage of the minority youth identified themselves as bicultural, with a smaller, but significant, number reporting a strong identification with their ethnic group. In contrast, the findings from the less integrated school revealed that the overwhelming majority strongly identified with their ethnic group. Based on these findings, one can conclude that in environments where there is perhaps less tolerance for cultural differences, preference for identifying with the ethnic group becomes more meaningful.

With respect to psychological functioning, there is mounting evidence suggesting that biculturalism contributes to healthy adjustment.⁴⁰ In a recent review of the literature on the psychological impact of biculturalism, LaFromboise, Coleman, and Gerton not only supported this contention but also proposed that the ability to function efficaciously in two cultures may be related to healthier psychological functioning. According to these authors, this “cultural competence” includes a variety of skills such as maintaining positive attitudes toward one’s own cultural/ethnic group and the majority culture and establishing a strong within-cultural-group support system.⁴¹ Another factor considered important is the ability to communicate effectively in both the native language and the language spoken by the dominant culture. However, it has also been suggested that

because biculturalism is dynamic and fluid, more research into specific dimensions that would help clarify its relationship to psychological adjustment is necessary.⁴²

Gender Differences

The examination of gender differences in the formation of ethnic identity is an area that has been largely overlooked. The few studies Phinney reviewed on this topic suggest that women may have more invested in this process than men.⁴³ Specifically, some of these studies show that women identify more with their ethnic group and culture than men. Interestingly, Parham and Helms, studying a population of African-Americans, found that the women were at higher stages of ethnic identity development than their male counterparts.⁴⁴

To date, there are no studies investigating potential gender differences in Latino ethnic identity development. However, the research that has examined gender differences in the acculturation process suggests that it has an impact on Latino men and women in different ways. For example, Espin points out that women who come from traditional cultural backgrounds may experience conflict as they are exposed to the new and changing roles of women in the United States.⁴⁵ It follows that as women adapt to these new roles, there could be changes in their ethnic identity. It is proposed that this would be a fruitful area of further inquiry.⁴⁶

Differences in Generations

Another important dimension to be considered when discussing Latino ethnic identity development involves generational differences among immigrants. Some studies have shown that identification with an ethnic group changes with the second- and third-generation descendants of immigrants living in the United States. For example, Rogler, Cooney, and Ortiz found that Puerto Rican children who had a longer exposure to U.S. culture and society showed less identification with the Puerto Rican culture than their parents.⁴⁷ However, the most striking finding was that the majority of these children perceived themselves to be either bicultural or identified themselves solely as Puerto Rican as opposed to a complete identification with "American" culture. Furthermore, important factors to consider in relation to generational differences are educational attainment of the second and third generations; place of residency (e.g., Latino communities versus non-Latino communities); the quality of life in these residential areas; and the degree of contact with an individual's ethnic cultural group.

Understanding Latino Identity Development

There is increasing awareness that ethnic identity and its development comprise a complex phenomenon. It is also recognized that identity is intimately related to culture. This is witnessed in the development of a variety of ethnic identity models that have surfaced in recent years. These models and the various approaches presented here are well intentioned; however, caution should be exercised in applying them to Latinos.

It is important for mental health professionals to understand that these models have their strengths and weaknesses. A major strength is that they help us to understand how environment influences identity. For example, some of the models focus on oppression as the driving force in triggering change in ethnic identity. On the other hand, a major weakness is that most of these models do not include potential forces which could also contribute to ethnic identity formation. This is particularly the case for Latinos.

As described in the previous section, one must consider factors like the role of acculturation as an important driving force.

Mental health professionals should weigh these fundamental issues when working with Latino clients. A starting point might be to follow the advice offered by Hoare who cogently states, "The greater the extent to which counselors know the symbols, meanings, and messages of the client's culture, and the world-and-person view those cultures express, the greater will be their ability to achieve cross-cultural identification."⁴⁸ Her statement reflects the view that not only should we learn about a client's unique cultural background, but also how it influences the way in which the person perceives immediate surroundings. Taking this one step further, the counselor's sensitivity to factors that contribute to ethnic identity development, as well as those dimensions which are part of its makeup are important considerations. For instance, Bernal, Knight, Ocampo, and Cota describe five components of identity: ethnic self-identification, ethnic constancy, ethnic role behaviors, ethnic knowledge, and ethnic feelings and preferences.⁴⁹

One of the most important contributions of the ethnic identity development models described is their helping us understand how the experiences of oppression and prejudice affect an individual's sense of self, sometimes leading to alienation and isolation. This could contribute to maladaptive behaviors that one might explore in a counseling relationship.

Policy Implications

It is important to conceptualize Latino ethnic identity and its development as complex and dynamic, involving many other factors. Specifically, a variety of socioeconomic and political factors that may have an impact on the development of ethnic identity are often overlooked in the psychological literature. For instance, it is generally acknowledged that poverty and discrimination lead to inadequate health care services. Also, within this socioeconomic and political context, there are inequities in education and employment opportunities that play a significant role in the identity development of Latino youth.⁵⁰

Given the complexity of Latino identity development, one can make several recommendations regarding public policy in areas of education and mental health. First, although well-intentioned school-based interventions have been developed to deal with cross-ethnic tension, conflict, and behavior problems among our adolescent populations,⁵¹ policymakers must not disregard the wide range of social problems Latino youth face that undoubtedly have an affect on their self-image. Second, a restructuring of the curricula in our educational system is necessary. In particular, Rotheram-Borus and Wyche have argued that developing adequate interventions in school settings calls for reform in which ethnic identity is integrated in all aspects of a curriculum, including the teaching of cultural diversity.⁵² An obvious benefit of teaching from a multicultural perspective is that it promotes ethnic pride. Policymakers are urged to continue such efforts in the public school system. Third, it is clear that positive role models are needed in the educational system. Efforts to recruit and train Latinos aggressively for teaching, administrative, and counseling positions should continue.⁵³ Policymakers are urged to support not only the restructuring of school curricula to reflect the richness of cultural and ethnic diversity, but also to facilitate the hiring of Latinos at all levels of the educational system.

With respect to mental health, there are several recommendations for policymakers to consider. Foremost among these is the need to examine the problems of Latinos in holis-

tic and systematic ways. It is not enough to address the issue of ethnic identity from a purely psychological context. It must be examined from sociopolitical and historical contexts as well. Second, policymakers must continue to advocate for culturally sensitive mental health services. Finally, efforts should be made to provide appropriate allocations of funding to conduct research in the area of Latino mental health. Although there is considerable agreement that ethnic identity is an important aspect of psychological functioning, more research is needed to examine the unique experiences and circumstances of the various Latino populations in the United States. ■

Notes

1. W. E. Cross, "Negro-to-Black Conversion Experience: Toward a Psychology of Black Liberation," *Black World* 20 (1971): 13-27; W. E. Cross, "The Thomas and Cross Models of Psychological Nigrescence: A Literature Review," *Journal of Black Psychology* 4 (1978): 13-31; *Black and White Racial Identity: Theory, Research, and Practice*, ed. J. E. Helms (New York: Greenwood, 1990); J. Phinney, "Stages of Ethnic Identity in Minority Group Adolescents," *Journal of Early Adolescence* 9 (1989): 34-49.
2. U.S. Bureau of the Census, *The Hispanic Population in the United States: March 1991* (Washington, D.C.: U.S. Government Printing Office, 1992).
3. C. H. Hoare, "Psychosocial Identity Development and Cultural Others," *Journal of Counseling and Development* 70 (1991): 45-53.
4. *Ibid.*, 46.
5. M. E. Bernal and G. P. Knight, "Introduction," in *Ethnic Identity: Formation and Transmission among Hispanics and Other Minorities*, edited by M. E. Bernal and G. P. Knight (Albany: State University of New York Press, 1993), 1-7.
6. H. Tajfel, *Human Groups and Social Categories: Studies in Social Psychology* (Cambridge: Cambridge University Press, 1981), 225.
7. B. M. Ferdman, "Literacy and Cultural Identity," *Harvard Educational Review* 60 (1990): 181-204.
8. Bernal and Knight, "Introduction," and T. A. Parham and J. E. Helms, "The Influence of Black Students' Racial Identity Attitudes on Preference for Counselor's Race," *Journal of Counseling Psychology* 28 (1981): 250-257.
9. L. H. Rogler, R. S. Cooney, and V. Ortiz, "Intergenerational Change in Ethnic Identity in the Puerto Rican Family," *International Migration Review* 14 (1980): 193-214.
10. J. García, "Ethnicity and Chicanos: Measurement of Ethnic Identification, Identity, and Consciousness," *Hispanic Journal of Behavioral Sciences* 4 (1982): 295-314.
11. E. H. Erikson, *Childhood and Society* (New York: W. W. Norton, 1956), and E. H. Erikson, *Identity, Youth, and Crisis* (New York: W. W. Norton, 1968).
12. J. Phinney, "Ethnic Identity in Adolescents and Adults: Review of Research," *Psychological Bulletin* 108 (1990): 499-514.
13. See *ibid.* for a recent review.

14. Bernal and Knight, "Introduction."
15. J. M. Vázquez, "The Ethnic Matrix: Implications for Human Service Practitioners," *Explorations in Ethnic Studies* 9 (1986): 1–18, and P. Weinreich, "The Operationalization of Ethnic Identity," in *Ethnic Psychology: Research and Practice with Immigrants, Refugees, Native Peoples, Ethnic Groups and Sojourners*, edited by J. Berry and R. Annis (Amsterdam: Swets and Zeitlinger, 1988), 149–168.
16. Cross, "Negro-to-Black Conversion Experience," and Cross, "The Thomas and Cross Models of Psychological Nigrescence."
17. Helms, *Black and White Racial Identity*.
18. D. Atkinson, G. Morten, and D. W. Sue, *Counseling American Minorities: A Cross-Cultural Perspective* (Dubuque, Ia.: W. C. Brown, 1989), 93–117.
19. D. W. Sue and D. Sue, *Counseling the Culturally Different: Theory and Practice*, 2d ed. (New York: John Wiley, 1990), 93–117.
20. Phinney, "Stages of Ethnic Identity in Minority Group Adolescents"; J. Phinney, "The Multigroup Ethnic Identity Measure: A New Scale for Use with Adolescents and Young Adults from Diverse Groups," *Journal of Adolescent Research* 7, no. 2 (1992): 156–177; J. Phinney, "A Three-Stage Model of Ethnic Identity Development in Adolescence," in Bernal and Knight, *Ethnic Identity*, 61–79.
21. Erikson, *Childhood and Society*, and *Identity, Youth, and Crisis*.
22. Phinney, "Three-Stage Model of Ethnic Identity Development."
23. J. Phinney and L. Alipuria, "Ethnic Identity in College Students from Four Ethnic Groups," *Journal of Adolescence* 13 (1990): 171–183.
24. Phinney, "Stages of Ethnic Identity in Minority Group Adolescents."
25. Phinney, "The Multigroup Ethnic Identity Measure."
26. Atkinson, Morten, and Sue, *Counseling American Minorities*.
27. Cross, "The Thomas and Cross Models of Psychological Nigrescence."
28. Phinney, "Stages of Ethnic Identity in Minority Group Adolescents."
29. Cross, "The Thomas and Cross Models of Psychological Nigrescence."
30. Atkinson, Morten, and Sue, *Counseling American Minorities*.
31. Phinney, "Stages of Ethnic Identity in Minority Group Adolescents."
32. Sue and Sue, *Counseling the Culturally Different*.
33. Ibid.
34. See Phinney, "Ethnic Identity in Adolescents and Adults," for a review.
35. G. Marín, "Issues in the Measurement of Acculturation among Hispanics," in K. F. Geisinger, ed., *Psychological Testing of Hispanics* (Washington, D.C.: American Psychological Association, 1992), 235–251, quoted, p. 239.

36. G. Marín, "Influence of Acculturation on Familialism and Self-Identification Among Hispanics," in Bernal and Knight, *Ethnic Identity*.
37. L. F. Estrada, "Family Influence in Demographic Trends in Hispanic Ethnic Identification and Labeling," in Bernal and Knight, *Ethnic Identity*, 163–179.
38. M. Rotheram-Borus, "Biculturalism among Adolescents," in Bernal and Knight, *Ethnic Identity*, 81–102, quoted, p. 88.
39. M. Rotheram-Borus, "Ethnic Differences in Adolescents' Identity Status and Associated Behavior Problems," *Journal of Adolescence* 12 (1989): 361–374.
40. M. Ramírez III, "Assessing and Understanding Biculturalism-Multiculturalism," in *Chicano Psychology*, 2d ed., edited by J. L. Martínez and R. H. Mendoza (New York: Academic Press, 1984), 77–94 and Rotheram-Borus, "Ethnic Differences in Adolescents' Identity Status."
41. T. La Fromboise, H. Coleman, and J. Gerton, "Psychological Impact of Biculturalism: Evidence and Theory," *Psychological Bulletin* 114, no. 3 (1993): 395–412.
42. Vázquez, "The Ethnic Matrix."
43. Phinney, "Ethnic Identity in Adolescents and Adults."
44. Parham and Helms, "The Influence of Black Students' Racial Identity Attitudes."
45. O. M. Espin, "Psychological Impact of Migration on Latinos: Implications for Psychotherapeutic Practice," in *Counseling American Minorities: A Cross-Cultural Perspective*, 4th ed., edited by D. R. Atkinson, G. Morten, and D. W. Sue (Dubuque, Ia.: William C. Brown, 1993), 279–293.
46. K. A. Ocampo, M. E. Bernal, and G. P. Knight, "Gender, Race, and Ethnicity: The Sequencing of Social Constancies," in Bernal and Knight, *Ethnic Identity*, 11–30.
47. Rogler, Cooney, and V. Ortiz, "Intergenerational Change in Ethnic Identity."
48. Hoare, "Psychosocial Identity Development and Cultural Others," 51.
49. For instance, Ocampo, Bernal, and Knight, "Gender, Race, and Ethnicity."
50. C. Markstrom-Adams and M. B. Spencer, "A Model of Identity Intervention with Minority Adolescents," in S. L. Archer, ed., *Interventions for Adolescent Identity Development* (Thousand Oaks, Calif.: Sage Publications, 1994), 84–102.
51. Archer, *Interventions for Adolescent Identity Development*.
52. M. Rotheram-Borus and K. F. Wyche, "Ethnic Differences in Identity Development in the United States," in Archer, *Interventions for Adolescent Identity Development*, 62–83.
53. P. Reyes and R. R. Valencia, "Educational Policy and the Growing Latino Student Population," in A. Padilla, ed., *Hispanic Psychology: Critical Issues in Therapy and Practice* (Thousand Oaks, Calif.: Sage Publications, 1995), 303–325.

The Influence of Family Background on the Educational Attainment of Latinos

Yolanda C. Padilla, Ph.D.

This study examines the family background and late childhood factors that influence the educational attainment of young Latino men. Using rich data available from the National Longitudinal Survey of Labor Market Experience–Youth Cohort, the author approached this study through a series of incremental regression models. The sample consists of 419 Latino male youth, ages 14 to 17, who were living at home in 1979. The analysis covers the years 1978 to 1988. The study, using data gathered during the respondents' childhood and early adolescence, surveys their educational outcomes approximately ten years later, when they are young adults. To account for the diversity of the experience of Latinos of different ethnic origins, the author included a dummy variable for ethnicity. The findings show that family background and resources, namely father's income and education, number of siblings, educational resources in the home, and national origin, have a strong effect on the total years of schooling completed. However, social psychological attributes, cognitive ability, parental socialization, and timing of immigration and generational status have a significant effect on education independent of social origins. In addition, the study also shows that second-generation Latino men achieve greater educational success than immigrants, but that third-generation Latino men show a marked lack of progress. Finally, the study, controlling for social origins and generation, demonstrates that Puerto Ricans acquire, on average, one full year less schooling than men of Mexican origin. Overall, the full model explains 44 percent of the variance in the level of educational attainment of young Latino men.

As Latinos come to represent a substantial proportion of the U.S. population, there is growing concern that they will not be educationally prepared to meet the challenges of the changing U.S. economy. According to the Bureau of Labor Statistics, the Latino share of the labor force from 1992 to 2005 is projected to grow by 63.7 percent, a rate of increase greater than that of any other demographic group.¹ While in 1992 Latinos represented 8 percent of the labor force, with 10.1 million workers, in 2005, they are expected to comprise 11 percent of the work force with 16.5 million workers. Yet currently, scarcely 60 percent of young Latino adults between the ages of 24 and 35 have completed high school in comparison with 89 percent of their non-Latino counterparts.²

As the primary avenue to viable employment, education is considered a key mechanism to economic success and escaping poverty. While the returns to education are

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“The educational achievement of young Latino men is explained by key factors associated with social origins, including family background. However, social psychological characteristics, cognitive ability, parental socialization, and immigration factors also play an important role. In terms of family background, family income is the most important predictor of educational attainment among young Latino men, all other factors remaining constant.”

— Yolanda C. Padilla

lower overall for Latinos than for non-Latino whites, there exist for Latinos dramatic within-group differences in earnings according to educational levels.³ For example, in 1989, 41 percent of Latino men who had not completed high school had earnings that fell below the poverty line for a family of four.⁴ In comparison, that proportion fell to 25.4 for those with at least a high school degree and 13.1 percent for those with a college degree.

The purpose of this study is to examine the factors in an individual's background and late childhood that influence the educational outcomes of young Latino adults. Specifically, it investigates the processes mediating the effects of family background on education. The study uses a standard socioeconomic achievement model (social origins→education→socioeconomic achievement) and integrates community- and social-level processes. This research thereby reflects the state-of-the-art conceptualizations of social mobility, which focus on the processes by which social status or position shape individual outcomes.⁵ Second, the study takes into account the latest theoretical discussions, which emphasize that the social and economic problems of Latinos, while similar in outcomes to other U.S. populations, come about through quite distinctive mechanisms, particularly immigration.⁶

The focus is on four areas affecting Latino education: family background, including family resources; characteristics of the local community during childhood; social psychological and cognitive attributes as a child, including parental socialization; and immigration and generational status. Each set of variables is incorporated into the analysis by estimating a series of incremental regression models. Providing a number of specifications is one way of discovering the effect of omitted variables and arriving at a more relevant model.⁷

Using a nationally representative longitudinal data set, this analysis utilizes data gathered during a respondent's childhood and early adolescence and observes the educational outcomes approximately ten years later when they are young adults. To take into account the diversity of the experiences of Latinos of different national origins, I included a dummy variable for ethnicity. We are therefore able to determine whether the educational achievement of Latinos is significantly different for Mexicans, Puerto Ricans, Cubans, and other Latinos.

Review of the Theoretical and Empirical Literature

Empirical analyses of the variables that affect Latino school success is quite limited. A review of the existing literature reveals that the previous research falls into three broad areas: analyses of the effects of school behavior, social mobility studies based primarily on cross-sectional or short-term longitudinal data, and ethnographic research of selected populations. This theoretical and empirical review draws on that literature.

Family Background and Resources

According to classic social mobility literature, family background is one of the most powerful predictors of socioeconomic achievement, including educational achievement. Recent reconceptualizations of the social mobility model include the emphasis on the intergenerational "transmission" of economic status; that is, individual success reflects parental advantage or disadvantage.⁸ Studies of Latino educational attainment have provided support for the social mobility theory, revealing that individuals whose parents had low levels of income and education tend to complete less education than those who

come from more advantaged families.⁹ This study extends such research by observing the respondents over a much longer period than previous studies have and during a key period in the life cycle, the transition to adulthood.

Community Origins

While the association between achievement and community origins has received attention in the literature, the focus has been on the effect on earnings. For example, research by Anna Santiago and Maria Enchautequi suggests that economic status is linked to an interaction between individual characteristics and geographic location.¹⁰ Much less is known about the impact of childhood community on school performance.¹¹ Research on the effect of geographic location during childhood on adult educational achievement is virtually nonexistent for Latinos. A cross-sectional study by Russell W. Rumberger found that Latino youth who were 18 to 21 years old in 1979 and not enrolled in high school had a greater probability of having completed high school if they resided in the South and in areas with high unemployment rates.¹² A major weakness of this study, owing to the cross-sectional nature of the data, however, is that geographic characteristics are measured after school completion.

Social Psychological and Cognitive Attributes and Socialization

A third set of variables associated with academic accomplishments consists of social psychological attributes, cognitive ability, and socialization. Studies of the general population indicate that high occupational aspirations and parental expectations concerning education have a positive effect on school success.¹³ In addition, cognitive ability has a strong effect on the school continuation decisions of individuals.¹⁴ Related research on Latino socialization has focused on school behavior. For example, a study by William Velez found that school-related social behavior, such as cutting classes and dating, had a negative effect on the probability of completing school.¹⁵ However, all in all, the social psychological aspects of Latino education have not been addressed.

Immigration and Generational Status

The dynamics of Latino immigration is key to an understanding of the Latinos' social mobility.¹⁶ The timing of immigration in an individual's life cycle is a particularly important aspect. Generally, research findings show that recent Latino immigrants receive less education than those who immigrated at a young age and nonimmigrants.¹⁷ Another consequential dimension of immigration is the recency of immigration represented by generational status. Initial findings indicate that Latino youth who are children of immigrants (second generations) do better than immigrants (first generations).¹⁸ However, a descriptive analysis by Jorge Chapa also shows that third-generation Latino youth do not show an improvement in educational attainment over second-generation youth.¹⁹ Vilma Ortiz finds evidence to support these results as they pertain to high school completion.²⁰

Nevertheless, the level of educational improvement across generations is a most important issue because it reflects the historical progress of Latinos and their ability to reach full economic, political, and social integration in the United States. The discontinuity in intergenerational advancement may be due to a number of complex factors. Two ethnographic studies shed some light on this issue. Harriett Romo, comparing the perceptions of schooling among Mexican-origin families in the Southwest, found a growing sense of alienation toward schools on the part of third-generation parents in

comparison with second-generation families.²¹ Lloyd H. Rogler and Rosemary Santana Cooney, basing their research on Puerto Rican families in New York City, concluded that the processes of educational mobility are not the same from one generation to the next. They found that “the migration experience affects the intergenerational processes . . . by rupturing the socioeconomic continuity,” because new generations of Latinos face a totally different occupational and employment structure from that of their parents.²² As a result, Latino generations subsequent to immigration have a more difficult time developing their human capital and transferring it to the labor market.

Data, Methodology, and Measures

The data for this study were drawn from the National Longitudinal Surveys of Labor Market Experience–Youth Cohort (NLSY). This survey contains eleven waves of data on a nationally representative sample of youth from 1979 to 1988. NLSY includes a supplemental sample of Latinos (for a total $n = 2002$), thus providing an adequate number of respondents to allow for statistical analysis of this group. Geographic-environmental data for NLSY respondents was obtained from the NLSY supplemental geocode data file (1979–1988).²³

The sample, confined to Latino male youth ages 14 to 17 who were living in the parental home in 1979 and had no missing values on the variables included in the analysis, totaled 419 respondents. Respondents who were part of an NLSY supplementary military sample conducted between 1979 and 1984, which was designed to represent the population serving in the military, were not included. The analyses, based on data from the 1979–1989 NLSY reports, cover the years 1978 to 1988.

I approached the statistical analysis by setting up an incremental multiequation model of educational achievement and used the ordinary least-squares method to estimate the education equation. In addition to the regression analyses, I present the results of descriptive analyses. To obtain nationally representative characteristics of the Latino sample across the period of observation, I weighted all variables in the descriptive analyses by the 1988 sample, which corrects for oversampling and attrition across the period of study.

Explanatory variables were measured when the respondents were between 14 and 17 years old. Education, the outcome variable, was measured in 1988 when the respondents ranged in age from 24 to 27. In addition, I selected this interval in order to capture the respondents’ transition to adulthood. Thus, explanatory variables were measured during late childhood and outcome variables during early adulthood. The latter age span corresponds roughly to the period of the upper limit of young adulthood, which is usually considered to be between the ages of 18 and 30.²⁴ According to Duane F. Alwin and Arland Thorton, the relationships between family socioeconomic variables and school achievement are quite similar whether measured in early childhood or during late adolescence.²⁵

Table 1 provides the list of variables included in the analyses and their definitions. The table is organized according to the sets of explanatory variables included in each of the four incremental models: (1) family background and resources, (2) community origins, (3) social psychological and cognitive attributes, and (4) immigration and generational status.

Table 1

Definition of Variables Included in the Analyses

Variable	Definition
EDUC88	Highest grade completed, 1988
MEXAM	1 if Mexican origin; 0 otherwise
PRICAN	1 if Puerto Rican origin; 0 otherwise
CUBAN	1 if Cuban origin; 0 otherwise
OTHIS	Other Hispanic; omitted category for ethnic origin dummy variables
AGE88	Age in 1988
FAJRHS	Father had a junior high school education; omitted category for father's education dummy variables
FAHS	1 if father had a high school education; 0 otherwise
FASOMCOL	1 if father had some college; 0 otherwise
FACOLGR	1 if father was a college graduate; 0 otherwise
FADKEDU ^a	1 if did not know father's education; 0 otherwise
FAMINC78	(Log) Family income in 1978 (in thousands)
FINCMISS ^a	1 if missing data for family income variable; 0 otherwise
EDUCRES	1 if at age 14 household received either magazine(s) or newspaper(s), or had a member who held a library card; 0 otherwise
SINGMOTH	1 if grew up in a female-headed family; 0 otherwise
TWOPAR	1 if grew up in a two-parent family; 0 otherwise
OTHPAR	Grew up in a another family arrangement; omitted category for family structure dummy variables
SIBLINGS	Number of siblings
HIUNEM79	1 if unemployment rate for SMSA or nonmetropolitan area is above the sample mean, 1979; 0 otherwise
NEAST79	1 if Northeast region, 1979; 0 otherwise
OTHREG79	1 if other region, 1979; 0 otherwise
SWEST79	Southwest, 1979; omitted category for region dummy variables
ASPNPROF	1 if at age 14–17 reported nonprofessional/managerial occupational aspirations; 0 otherwise
ASPDK	1 if unsure of occupational aspiration; 0 otherwise
ASPPROF	Reported professional/managerial occupational aspirations; omitted category for occupational aspirations dummy variables
AFQT	1980 Armed Forces Qualification Test (AFQT) raw score
AFQTMIS ^a	1 if did not take AFQT test; 0 otherwise
PAEXPCOL	1 if parent expected college attendance; 0 otherwise
OTHINFLU	1 if someone other than parent most influential; 0 otherwise
PANOCOL	Parent did not expect college attendance; omitted category for parent's college expectations dummy variables
FIRNEWIM	1 if first generation, recent immigrant; 0 otherwise
FIOLDIM	1 if first generation, early immigrant; 0 otherwise
SECGENER	1 if second generation; 0 otherwise
DKGENER	1 if could not determine generation because father's place of birth was missing; 0 otherwise
THIGENER	Third generation; omitted category for generation dummy variables.

Source: Computations with the 1979 to 1989 waves of the National Longitudinal Survey of Youth for men aged 14 to 17 in 1979.

^aFor these variables, the mean value was assigned to the cases with missing values: father's education, AFQT score, unemployment rate, and family income in 1978. In addition, cases that did not have family income information in 1978 were assigned the 1979 family income value adjusted for inflation.

Table 2 contains the means (or proportions), standard deviations, and minimum and maximum values for the variables used in the equations. Level of education completed is measured as the highest grade (between 0 and 20) a respondent had attained as of 1988.

Table 2

Descriptive Statistics of the Variables Included in the Analyses

Variable	Mean/ Proportion	Standard Deviation	Minimum	Maximum
EDUC88	11.914	2.164	2.00	19.00
MEXAM	.511	.500	.00	1.00
PRICAN	.172	.378	.00	1.00
CUBAN	.043	.203	.00	1.00
OTHHIS	.274	.447	.00	1.00
AGE88	25.060	1.104	23.00	27.00
FAJRHS	.360	.481	.00	1.00
FAHS	.313	.464	.00	1.00
FASOMCOL	.064	.246	.00	1.00
FACOLGR	.062	.242	.00	1.00
FADKEDU	.200	.401	.00	1.0.0
FAMINC78	13.549	10.206	.00	75.00
FINCMISS	.076	.266	.00	1.00
EDUCRES	.788	.410	.00	1.00
SINGMOTH	.222	.416	.00	1.00
TWOPAR	.730	.444	.00	1.00
OTHPAR	.048	.213	.00	1.00
SIBLINGS	4.375	2.896	.00	16.00
SWEST79	.599	.491	.00	1.00
NEAST79	.153	.360	.00	1.00
OTHREG79	.248	.432	.00	1.00
HIUNEM79	.389	.488	.00	1.00
ASPPROF	.473	.500	.00	1.00
ASPNPROF	.394	.489	.00	1.00
ASPDK	.134	341.00	.00	1.00
AFQT	55.223	19.646	6.00	101.00
AFQTMISS	.038	.192	.00	1.00
PAEXPCOL	.504	.501	.00	1.00
PANOCOL	.143	.351	.00	1.00
OTHINFLU	.353	.479	.00	1.00
FIRNEWIM	.050	.218	.00	1.00
FIROLDIM	.232	.422	.00	1.00
SECGENER	.260	.439	.00	1.00
THIGENER	.434	.496	.00	1.00
DKGENER	.024	.153	.00	1.00

Number of valid observations = 419

Source: Computations with the 1979 to 1989 waves of the National Longitudinal Survey of Youth for men aged 14 to 17 in 1979.

The first set of variables, family background and resources, includes ethnic origin, age in 1988, father’s education, parents’ income in 1979, educational resources, family structure, and number of siblings.

Ethnicity, referring to the national origin of the Latinos, is based on self-classification. It is divided into the largest groups, Mexicans and Puerto Ricans, with a separate

category created for Cubans. In NLSY terminology, all other Latinos are grouped under “other Hispanics.”

Father's education refers to the total number of years of education the respondent's father had completed as of 1979.

Family income refers to the annual income of the respondent's family in 1979. Since the analysis is confined to respondents who lived in their parents' home in 1979, this represents the economic status of their family of origin.

Educational resources in the home refers to whether any household member regularly received magazines or newspapers or had a library card at the time the respondent was 14 years old.

Family structure at age 14 is divided into three categories: two-parent families (not confined to intact families — includes father/stepmother or mother/stepfather families); female-headed families (single mother, including single-mother families with another relative in the home), and other (family configurations, including single-father families or families headed by relatives).

Number of siblings refers to the number of siblings in the respondent's family in 1979. The size of the family is expected to influence educational achievement because of its strain on family resources.

Community origins consists of a set of variables representing the economic environment of the area where the respondents lived and attended school as children (in 1979). They include the 1979 *unemployment rate* in the respondent's metropolitan area of residence and the respondent's region of origin, grouped as the Northeast, the Southwest, and other. Thus, region is categorized into U.S. areas of Latino concentration.

The third set of predictor variables, *social psychological and cognitive attributes and socialization*, represents factors measured in late childhood: the respondent's occupational aspiration and cognitive ability and the parents' educational expectations for the respondent.

Individual's occupational aspiration refers to the occupation in which the respondent aspires to engage at age 35 (recoded from the census three-digit occupation codes). These variables are categorized as professional/managerial, nonprofessional/managerial, or unsure of occupational aspirations.

Cognitive ability refers to the respondent's score on the Armed Forces Qualification Test (AFQT), which is used to measure the respondent's skill level. The test, administered in 1980, yields a raw score based on the sum of the scores of four areas: word knowledge, arithmetic reasoning, paragraph comprehension, and half the score of the numeric operations area.

Parental college expectations represents parental socialization and refers to parental attitudes concerning the respondent's educational potential. It is the respondent's perception in 1979 of the expectations of his parent(s) concerning his education. Specifically, does the respondent think that his parent(s) would disapprove if after completing high school he decided not to attend college? (Not all respondents had information on this variable because some did not identify their parent[s] as their major influence. A dummy was created for individuals who reported being more influenced by people other than their parent[s]. In 65 percent of the cases the person identified by the respondent as “the most influential person in R's attitude toward life” was a parent; in 10.2 percent of the cases it was another family member. The remaining persons identified as influential were teachers, peers and friends, coworkers, and guidance counselors.)

Immigration and generational status are combined and broken down into four categories of generational status.

Generational status was computed from information available in NLSY on the place of birth of the respondent and the respondent's father. Generation is defined as follows: a first-generation Latino is a person born outside the United States (an immigrant); a second-generation person is one born in the United States of a foreign-born father; a third-plus-generation individual is U.S.-born of a U.S.-born father. First generation was recoded into two categories, recent immigrant and early immigrant. Latinos who immigrated prior to their fourteenth birthday are considered early immigrants. For Puerto Ricans, the education model was estimated by two specifications: one classifies all respondents as native-born; the other takes into account the migrant status of respondents who arrived from Puerto Rico.

Results: Descriptive Analysis

The longitudinal analysis shows that Latino males 14 to 17 years old who were living in the United States in 1979 had attained an average of twelve years of schooling as of 1988. While 44.9 percent had completed exactly twelve years of school, 27.6 percent had less than a high school education. Another 27.5 percent had some college or other training beyond high school. In addition, 87.3 percent reported having completed their education as of 1988, most within three years or more. Another 12.7 percent were still enrolled in school as of 1988.

Educational attainment varied significantly for Latino groups according to national origin. As shown in Table 3, a greater proportion of Puerto Ricans (48.9%) had attained twelve years of schooling compared with Mexican-Americans (44.8%), Cubans (41.9%), and other Latinos (30%). However, the proportion of Puerto Ricans who had obtained schooling beyond high school, 18.9 percent, was much lower than that of the other three groups (24% of Mexican-Americans, 41.6% of Cubans, and 35.5% of other Latinos). On the other hand, the greater educational achievement of Cubans, with a mean of 13.2 years, is evident from this bivariate analysis.

While nativity — foreign or U.S. birth — affected the educational achievement of Latinos, the difference is not statistically significant. A greater proportion of the foreign born did not finish high school in comparison with U.S.-born individuals (46.8% versus 36.8%). But nativity had less of an effect on college attendance, only a slightly greater proportion of the native born having gone to college (28.6% versus 24.6%).

However, breaking down nativity by generational status reveals some important information and statistically significant group differences. Not surprisingly, recent immigrants had much less education; about half of them had less than high school. Compared with early immigrants and second- and third-plus-generation Latinos, recent immigrants averaged at least one and a half years less schooling. Two other points stand out: the superior performance of first-generation early immigrants and second-generation men and the lack of progress among third-plus generations.

The Effects of Immigration on the Educational Mobility of Latinos

The findings provide evidence for the significance of timing of family immigration and generational status for educational achievement among Latinos. They offer some insights concerning the differences in the educational attainment of Latinos who were born in the United States or immigrated here prior to their seventeenth birthday versus

those who immigrated at an older age. That is, observing the educational trajectories of U.S. Latino adolescents in 1979 through their transition to adulthood in 1988 yields a different profile of the Latino educational levels than a cross-sectional view of the total Latino population at the same end point.

Table 3

**Educational Attainment of Latino Men Aged 23 to 27 in 1988
by National Origin, Nativity, and Generational Status**

Ethnic Background Factors	Below High School	High School	Some College	Mean Years
All Latino Men	27.60	44.90	27.50	12.00
National Origin ^a				
Mexican-American	30.50	44.80	24.70	11.90
Puerto Rican	32.20	48.90	18.90	11.40
Cuban	16.50	41.90	41.60	13.20
Other Latino	22.20	43.00	34.70	12.30
Nativity				
In the United States	25.50	45.90	28.60	12.10
In Other Country	32.90	42.40	24.60	11.60
Generational Status ^a				
First — Recent Immigrant	49.00	17.00	24.00	10.50
First — Early Immigrant	28.60	48.90	22.50	11.90
Second	25.50	37.10	37.40	12.40
Third-Plus	24.80	51.40	23.70	12.00
Number of cases	131.00	214.00	131.00	476.00

Source: Computations with the 1979 to 1989 waves of the National Longitudinal Survey of Youth for men aged 14 to 17 in 1979.

^aStatistically significant at least at the .10 level.

These analyses employing the NLSY data represent the 1988 situation of the cohort of 14- to 17-year-old Latino men who were U.S. residents in 1979. However, according to an analysis of the 1990 Panel Study of Income Dynamics–Latino National Political Survey (Early Release File), 31.7 percent of Latinos living in the United States in 1988 who would have been 14 to 19 years old in 1979 were not living here at that time (weighted estimate).²⁶ Therefore, the NLSY is roughly representative of two-thirds of the 1988 Latino population in this age group. The advantage to such a selective sample representation is that because it is not confounded by the status of newly arrived immigrants, it provides a clearer profile of the intergenerational social mobility of Latinos.

Tables 4 and 5 compare the educational attainment of Latinos based on Current Populations Reports (census data) and the NLSY for the same period and similar age groupings. As shown in Table 4, the 1988 proportion of high school graduates among all Latino men 25 to 29 is considerably lower than that of whites and blacks, 61 percent compared with 84.8 percent and 80.6 percent, respectively.²⁷ However, educational

attainment is much higher for Latinos who were living in this country by 1979 (70.5%), namely, those who had immigrated by at least age 17.

A breakdown by ethnic origin also shows dramatic differences between the NLSY longitudinal data and the census cross-sectional data on the educational attainment of Latinos. Table 5 shows the proportion of men ages 25 to 34, classified by ethnicity, who had completed four years of high school or more as of 1988. (The 25 to 34 age group available in the census reports is the closest to the 24 to 28 age group in the current NLSY analysis.) The figures show that, overall, only 59.9 percent of Latinos and 72.4 percent of Latinos living in the United States in 1979 had completed at least four years of education compared with 89.2 percent of men of non-Latino origin. Even the group with the highest educational level, Cubans, fell below non-Latinos.²⁸

Educational achievement is quite different among Latino men of various ethnic origins. According to census figures, those of Mexican origin have the lowest educational levels: only 49.8 percent acquired four years of high school or more, followed by 75.9 percent of Puerto Ricans and 83.8 percent of Cubans. But the figures for the 1979 NLSY cohort show different results: the proportions for Mexicans and Puerto Ricans converge to near 70 percent. The levels for Cubans and other Latinos remain stable.

Table 4

**Years of School Completed for Men Ages 25 to 29
by Race and Latino Origin, 1988**

Race or Origin	Median Years of School Completed	Percentage High School Graduates
All Races	12.9	84.4
Whites	12.9	84.8
Blacks	12.7	80.6
All Latinos	12.3	61.0
Latinos Living in the United States as of 1979 ^a	12.0	70.5

Source: U.S. Bureau of the Census, *Educational Attainment in the United States*, Current Population Reports, Series P-20, No. 451 (Washington, D.C.: U.S. Government Printing Office, 1991), Table 1. Figures are for March 1989.

^aSource: Computations with the 1979 to 1989 waves of the National Longitudinal Survey of Youth for men aged 14 to 17 in 1979. These figures, based on weighted estimates, are for individuals who were 24 to 28 in 1988. NLSY interviews conducted June–December 1988. Dates of both reports are chosen to represent the years of school completed by the end of the school year in 1988 (approximately May/June).

What accounts for the differences in attainment when comparing the total Puerto Rican and Mexican populations and the 1979 cohorts? The total population of Puerto Ricans and Mexicans represent not only men who were U.S. residents as of 1979, but also the new immigrants since then. It is possible that the educational attainment of these groups reflects the “quality” of new immigrants. Evidence shows, for example, that Mexican immigrants are increasingly less educated than they were in the past, which depresses the educational levels of the overall U.S. Mexican-origin population.²⁹ On the other hand, limited research suggests increasingly higher educational levels

among Puerto Rican immigrants between 1960 and 1980. Between 1955 and 1960, 14 percent of immigrants were high school graduates; between 1975 and 1980, the figure rose to 37 percent.³⁰ One study by the Junta de Planificación de Puerto Rico attributes this increase to greater educational selectivity among Puerto Rican migrants to the United States relative to the population in Puerto Rico.³¹ But a study by Vilma Ortiz shows that this change actually reflects the educational gains made in the island and that immigrants and remainers have similar educational status.³²

Table 5

**Proportion of Young Men Completing Four Years of High School
or More by Race and Latino Origin, 1988**

Race or Origin	All Men (Ages 25 to 34) ^a	Men Living in the United States as of 1979 (Ages 24 to 28) ^b
All Races	86.6	00.0
Not Latino Origin	89.2	00.0
All Latinos	59.9	72.4
Mexican	49.8	69.5
Puerto Rican	75.9	67.8
Cuban	83.8	83.5
Central and South American	70.2	00.0
Other Latino	77.0	77.8

^aSource: U.S. Bureau of the Census, *The Hispanic Population in the United States: March 1989*, Current Population Reports, Series P-20, No. 444 (Washington, D.C.: U.S. Government Printing Office, May 1990), Table 1.

^bSource: Computations with the 1979 to 1989 waves of the National Longitudinal Survey of Youth for Latino men aged 14 to 17 in 1979. These figures are based on weighted estimates. NLSY interviews conducted June–December 1988. Dates of both reports are chosen to represent the years of school completed by the end of the school year in 1988 (approximately May/June). The Other Hispanic category in the NLSY sample includes Central and South Americans. For Puerto Ricans “living in the United States” refers to the continental United States.

An equally important determinant of the education of Latinos is U.S. generational status. The descriptive analysis takes into account the effect of migrant status of Puerto Ricans. (Those born in Puerto Rico are classified as foreign born.) Overall, educational achievement is greater among the U.S. born than the foreign born. Although this is true, when years of school completed are measured for different generations, the results are mixed. The proportions of high school graduates increase across generations from 64.3 percent for first-generation Latinos, to 71.1 percent for second-generation, to 74.7 percent among third-plus-generation men. Nevertheless, there is virtually no difference in mean years of school completed between second- and third-generation Latino men within the same birth cohort; in fact, the figure is slightly higher for second-generation men. The results appear in Table 6.

The findings concerning the educational progress of Latinos across generations support Jorge Chapa’s contention in his study of Mexican-Americans that taking the higher achievement of native Latinos over immigrants as evidence of assimilation without reference to generational status can be misleading.³³

The purpose of this brief analysis was to show that simply comparing the educational achievement of native-born and foreign-born Latinos provides a limited view. The reason is that classifying the educational attainment of the native born by generation shows that their progress across generations is much slower. While the NLSY data indicate that the proportion of high school graduates is greater among third-generation men, their mean educational achievement is lower than that of second generations at the same time.

Table 6

Years of School Completed for Latino Men Ages 24 to 28 Who Lived in the United States in 1979, by Selected Social Characteristics, 1988

Social Characteristics	Mean	Percent Median	High School Graduates
All Latinos	12.0	12.0	70.5
First Generation ^a	11.6	12.0	64.3
Second Generation	12.4	12.0	71.1
Third Generation	12.0	12.0	74.7
U.S. Born	12.1	12.0	73.0
Foreign Born ^b	11.6	12.0	63.9

Source: Computations with the 1979 to 1989 waves of the National Longitudinal Survey of Youth for Latino men aged 14 to 17 in 1979. These figures are based on weighted estimates.

^a2.8 percent of the NLSY respondents did not have information on generation. For Puerto Ricans, generation is based on tenure in the continental United States.

^bFor Puerto Ricans, foreign born means island born.

Results: Multivariate Analysis

This section presents the results of the regression analyses of education. Education (total years of education completed) is estimated as a function of four sets of exogenous variables: (1) family background, including family resources, (2) characteristics of the local community during childhood, (3) social psychological and cognitive attributes as a child, including parental socialization, and (4) immigration and generational status.

The results show that the variables which have a significant effect on education are parents' education, family income, national origin, parental expectations concerning college, occupational aspirations, cognitive ability, generational status, and recency of immigration. Local economic conditions during childhood do not add to the explanation of education.

Table 7 reports on the four specifications of the background determinants of educational attainment. Each model takes into account the additional contribution of each of four different aspects of childhood influences on educational achievement. I conducted the regression analyses in this manner to examine the appropriateness of the classic socioeconomic achievement model and explore the inclusion of variables that may more closely reflect the experience of Latinos.

Table 7

**The Effects of Family Background, Community Origins,
Social Psychological, and Immigration Factors on Total Years
of Schooling Completed**

	Model 1	Model 2	Model 3	Model 4
Variable	Family	Community	Individual	
Immigration	Background	Origins	Attributes	Factors
Constant	8.831 (2.585)	8.778 (2.593)	10.298 (2.320)	8.673 (2.330)
Puerto Rican	-.483 * (.272)	-.673 * (.367)	-.588 * (.324)	-.459 (.338)
Cuban	.451 (.495)	.402 (.528)	.143 (.468)	-.234 (.472)
Other Hispanic ^a	-.107 (.243)	-.181 (.274)	-.265 (.242)	-.239 (.240)
Age in 1988	-.034 (.087)	-.034 (.087)	-.093 (.073)	-.047 (.077)
Father's education ^b				
High school	.066 (.248)	.098 (.250)	-.064 (.221)	-.064 (.220)
Some college	1.037 ** (.426)	1.067 *** (.428)	.420 (.382)	.425 (.377)
College graduate	1.878 *** (.458)	1.960 *** (.464)	1.161 *** (.416)	1.112 *** (.409)
DK father's educ.	-.385 (.272)	-.342 (.276)	-.169 (.244)	-.277 (.244)
Family income (log)	.430 *** (.150)	.430 *** (.151)	.181 (.138)	.235 * (.136)
Family inc. missing	-.817 ** (.362)	-.787 ** (.369)	-.486 (.328)	-.556 * (.323)
Educ. resources	.650 *** (.246)	.633 *** (.248)	.215 (.223)	.172 (.226)
Family structure ^c				
Single mother	-.010 (.256)	-.043 (.261)	-.194 (.232)	-.151 (.232)
Other family type	-.813 * (.464)	-.873 * (.467)	-.417 (.418)	-.131 (.422)
Siblings	-.115 *** (.035)	-.114 *** (.035)	-.015 (.032)	-.023 (.032)
Region ^d				
Northeast	.330 (.344)	.385 (.345)	.393	(.388)
Other region		.031 (.289)	.123 (.258)	.190 (.255)
High unemployment		.143 (.217)	.062 (.193)	.083 (.190)
Occup. aspiration ^e				
Nonprofessional			-.831 *** (.201)	.817 *** (.204)
Don't know			-.675 *** (.267)	-.643 ** (.265)

Table 7, continued

	Model 1	Model 2	Model 3	Model 4
Variable	Family	Community	Individual	
Immigration	Background	Origins	Attributes	Factors
AFQT score			.041 *** (.005)	.040 *** (.005)
College expectations ^f Parents expect col.			.601 ** (.260)	.552 ** (.257)
Other influence			.386 (.271)	.203 (.271)
Generational status ^g First — recent immigrant				-.995 ** (.459)
First — early immigrant				.512 ** (.253)
Second				.707 *** (.259)
R ²	.225	.229	.414	.440
Adjusted R ²	.199	.197	.380	.401
Signif. F. change	.568	.000	.002	

Number of observations = 419
Mean of dependent variable: 11.914

Source: Computations with the 1979 to 1989 waves of the National Longitudinal Survey of Youth for Latino men aged 14 to 17 in 1979.

Note: Numbers in parentheses are the estimates of the standard errors of the regression coefficients. Notation for significance levels: *p <.10, **p <.05, ***p <.01.

- ^aReference category is Mexican-American.
- ^bReference category is father has less than high school education.
- ^cReference category is two-parent family.
- ^dReference category is Southwest.
- ^eReference category is aspires to a professional occupation.
- ^fReference category is parents do not expect college.
- ^gReference category is third-plus generation.

Model 1: Family Background and Resources

In this model, education is estimated as a function of family background, which includes parental education, family resources, and family structure. Family background variables explain 22.5 percent of the variance in educational achievement among Latino men. As shown in Table 7, column 1, the results indicate that all factors but one have a statistically significant effect on education. Latino men’s years of schooling increase consistently with the level of the father’s education. However, the effect is significant only if the father had a college-level education. Father’s education did not predict the education of Latinos whose fathers had only up to a high school–level education. Because of the high correlation between father’s and mother’s education ($r = .598$),

both variables were not included simultaneously in the equation. However, a separate analysis, not shown here, revealed that substituting mother's education in the equation yielded almost identical results.

Family resources had an important influence. First, the higher the parents' family income during childhood, the higher the ultimate educational level achieved later in life by Latino men. For each \$1,000-unit increase in the log of family income, education increased by .430 year. Second, the availability of magazines, newspapers, or library cards in the home resulted in .650 additional year of schooling.

Factors that decrease the level of educational attainment are number of siblings and Puerto Rican origin. For each additional sibling, years of schooling obtained decreases by slightly over one-tenth of a year. In addition, men of Puerto Rican origin obtained, on average, half a year less schooling.

On the other hand, according to this analysis, controlling for other family background factors, growing up in a female-headed family does not place Latino men at an educational disadvantage in comparison with men who grew up in two-parent families. While this variable has a negative effect, it is very small ($b = -.01$) and not statistically significant.

Model 2: Community Origins

Adding measures of the economic environment in the area of residence during late childhood did not explain any further variance in the model (Table 7, column 2). None of the variables representing economic structure had a significant effect on the level of education completed by Latino men. Growing up in areas of high unemployment did not deter them from getting an education. In a separate analysis, an interaction term for high unemployment and child poverty was included to determine whether having grown up poor had an effect that depended on labor-market conditions in the area. The interaction was found not to be significant.

In addition, the inclusion of labor-market variables resulted in little change in the size of the other estimated coefficients. The one exception is Puerto Rican origin. Controlling for region and high unemployment in the local labor market causes Puerto Rican ethnicity to result in a greater negative effect, increasing from -.483 in Model 1 to -.673 in Model 2.

Given the results, it is likely that economic opportunities have a direct effect on the economic well-being — income — of the parents, which in turn directly influences the educational outcomes of children. On the other hand, economic conditions may need to be measured in terms that more directly affect the educational opportunities of youth, such as city-level and school-level racial segregation, area tax base, neighborhood deterioration or prosperity, and the availability of job opportunities, which can serve as an alternative to continued schooling.

Model 3: Social Psychological, Cognitive, and Socialization Factors

Taking into account the effect on educational attainment in adulthood of the social psychological, cognitive, and socialization characteristics of individuals assessed during late childhood has a dramatic effect (see Table 7, column 3). Adding this set of variables contributes a great deal to the difference explained in educational outcomes: the r^2 increases to 41.4 percent. What is more important is that these effects occur net of family background variables, including parents' education.

First, cognitive ability in childhood has a powerful effect on educational achievement by the time Latino men have reached the ages of 23 to 27. Based on a 105-point scale of verbal and mathematical skills, the unit increase in years of education is .041, which means that holding all other variables constant, someone falling within the average score of 55 gains an additional two and a quarter years of education — $(.041) \times 55.223$. Someone who falls one standard deviation above the mean gains a total of about three years of schooling owing to his test scores.

Similarly, the occupational aspirations of Latino youth early on are reflected in the amount of education they secure later as they make the transition to adulthood. Both individuals who aspired to no more than a nonprofessional occupation and those who were unsure of their occupational goals curtailed their education — by close to a year — compared with those whose aspirations involved a professional career.

The expectations of parents regarding higher education for their child or children also played a key role in how much education Latino men obtained. Latinos who grew up perceiving that their parents expected them to attend college obtained .601 year more schooling than those who did not.

At the same time, controlling for individual-level factors results in a number of family background variables becoming less important predictors. The number of siblings in the family and the educational resources in the home no longer have a significant effect on the educational outcomes of Latino men. Father's education also becomes less of an influence when adjusted for personal qualities and aspirations.

Family income has a positive effect over and beyond social psychological, cognitive, and socialization facets of the individual, but the effect is also smaller and insignificant, dropping from .430 to .181. On the other hand, even when controlling is done for these characteristics, Puerto Ricans obtain less education than other ethnic groups.

Model 4: Immigration and Generational Status (Full Model)

In the final model (Table 7, column 4), factors associated with immigration history and generational status are introduced. As expected, the results suggest that educational achievement cannot be compared across different Latino groups without also taking into account their individual and generational tenure in the United States.

Timing of immigration and generation play a most important role in predicting educational attainment. In the NLSY sample, 21.7 are first generation; of these, 4.5 percent are recent immigrants and 17.2 percent immigrated after age 14. The proportion of second-generation Latinos (sons of immigrants) is 14.8 percent, and the remaining 61.1 percent are third-plus-generation Latinos. (Generation was not determined for the remaining .024 percent, because they were unable to provide information on their father's place of birth, and a dummy variable for missing values is included in the equation.)

According to the findings, respondents who were not living in the United States by age 14 completed a full grade less than third-generation men, while both first-generation early immigrants and second generations achieve more years of schooling than third-plus-generation Latinos. The advantage of second generations over men of third generations and beyond is three-quarters of a grade, and their advantage over early immigrants is half a grade.

Overall, the full model explains 44 percent of the variance in highest grade completed by young Latino men. While the inclusion of immigration results in some important effects, the coefficients for the other factors remain robust. Specifically, family income has a positive effect on education within all the alternative specifications. The same is

true for the effect of father's education. Finally, all the coefficients of the social psychological, cognitive, and socialization factors are also quite strong. The one exception is the effect of Puerto Rican origin. Once immigration factors are controlled, there is no longer a statistically significant difference in the years of schooling obtained by different Latino subgroups. However, the difference is still large: Puerto Ricans complete close to half a year less schooling than Mexican-American men.

Table 8

Regression Analysis Accounting for the Migration/Generational Status of Puerto Ricans within the Continental United States

Variable	b	Standard Error
Constant	8.541	2.301
Puerto Rican	-.985 ***	.326
Cuban	-.338	.469
Other Hispanic	-.261	.237
Age in 1988	-.048	.076
Father's Education		
High school	-.043	.217
Some college	.434	.373
College graduate	1.144 ***	.406
DK father's educ.	-.286	.242
Family income (log)	.261 **	.135
Family inc. missing	-.554 *	.319
Educ. resource	.067	.224
Family structure		
Single mother	-.157	.229
Other family type	-.108	.416
Siblings	-.030	.032
Region		
Northeast	.313	.345
Other region	.174	.253
High unemployment	.106	.188
Occupational Aspiration		
Nonprofessional	-.824 ***	.201
Don't know	-.596 **	.263
AFQT score	.041 ***	.005
College Expectations		
Parents expect col.	.480 *	.255
Other influence	.144	.269
Generational Status		
First — recent immigrant	-1.146 ***	.436
First — early immigrant	.636 ***	.235
Second	.737 ***	.231
R ²	.451	
Adjusted R ²	.413	
Number of observations = 419		

Source: Computations with the 1979 to 1989 waves of the National Longitudinal Survey of Youth for Latino men aged 14 to 17 in 1979.

Note: Notation for significance levels: *p < .10, **p < .05, ***p < .01. Reference categories listed in Table 7.

Model Accounting for the Generational Status of Puerto Ricans within the Continental United States

In the foregoing regression analysis, Puerto Ricans born in Puerto Rico were classified as U.S.-born, based on their legal status in this country. Likewise, those living in Puerto Rico at age 14 were classified U.S. residents. In effect, all of them were classified as third-plus generation. However, based on the literature, there is reason to believe that the migration experience between Puerto Rico and the United States may reflect the immigration and settlement experience of other Latinos.

For example, Frank Bean and Marta Tienda and Clara Rodriguez discuss in great detail the migration patterns of Puerto Ricans to the U.S. mainland and their implications for their economic well-being.³⁴ Previous status attainment research classified Puerto Ricans as foreign-born while recognizing their legal status as U.S. citizens.³⁵ In this part of the analysis, the effect of the generational experience of Puerto Ricans within the continental United States on educational attainment is investigated.

Therefore, I conducted a separate analysis, taking into account whether Puerto Rican respondents were born in the continental United States or in the island of Puerto Rico, the nativity status of their parents, and the U.S. residence status at age 14 of migrants to the continental United States. As displayed in Table 8, this reveals some striking results. The findings show that, controlling for tenure in the continental United States and holding all other variables constant, Puerto Rican origin has a huge negative effect, decreasing grades completed by one year ($b = -.985$) relative to Mexican-Americans. Thus, the coefficient for Puerto Rican origin increased by over half a year from .459 in the original specification. These results indicate that the generational status of Puerto Ricans within the continental United States is a strong predictor of educational achievement. In effect, when one compares Puerto Ricans and Mexicans of the same generation, Puerto Ricans fare worse than Mexicans. (When one compares both groups in general, Puerto Ricans still achieve less schooling, but there is less of a disparity.)

Discussion

My study extends earlier work on the effect of socioeconomic background and achievement on Latino educational attainment. While some prior studies incorporated Latinos, the availability of the National Longitudinal Survey of Youth allowed for a more detailed and up-to-date analysis. On the whole, the results are consistent with previous research on Latinos and the general population, but they also add new insights.

The educational achievement of young Latino men is explained by key factors associated with social origins, including family background. However, social psychological characteristics, cognitive ability, parental socialization, and immigration factors also play an important role. In terms of family background, family income is the most important predictor of educational attainment among young Latino men, all other factors remaining constant. Social psychological characteristics and cognitive capacity also play an important role in determining how much education Latino men obtain. In contrast, the economic milieu in which the youth grow up (level of unemployment rate and region) does not translate into differences in school success.

Finally, factors associated with immigration indicate that comparing the educational status of all Latinos without taking into account the timing of immigration and genera-

tion is misleading. First, respondents who had moved to the United States by age 14 received more schooling. Second, educational attainment does not follow the pattern expected from an assimilationist perspective. Assimilation theory predicts that first-generation Latinos would do worse than subsequent generations, but that educational attainment would improve with every new generation in this country. Since assimilation implies a two-way process, this theory argues that subsequent generations would adopt mainstream ways of life and that opportunities would increasingly open up for them.

However, what this regression analysis shows is that third-generation Latino men are worse off than all other Latino men except recent immigrants. Sons of immigrants excel in terms of educational attainment in comparison with early immigrants or men of third or subsequent generations. But it is likely that the factors contributing to the low educational achievement of recent immigrants and third-plus generations are quite different. That is, while the educational achievement of recent immigrants is probably largely influenced by the structure of opportunity in their countries of origin and by their immigration experience (e.g., legality of entry, language problems), that of sons of U.S.-born parents is shaped by the structure of opportunity in the United States. It is important to note that this study compares the educational achievement of different generations at one point in time. With the future availability of longitudinal data on Latinos, we will be able to contrast the educational progress of Latinos by tracking the children of the sample respondents over time, namely, correlating how sons, fathers, and grandfathers fare at various historical eras.

The strength of the status attainment model lies in its adequacy in measuring structural factors that shape the opportunities of individuals as far as the socioeconomic position of the family of origin is concerned. But this is not to dismiss the significance of other structural explanations of achievement, such as discrimination and housing segregation, some of which require a variety of methodologies.

According to the literature, a major structural impediment to the education of Latinos is related to the resources of the school. For example, the Latino Policy Development Project *Make Something Happen: Latino and Urban School Reform* lists a number of characteristics of the school environment that affect attendance and retention of Latino students: poorly equipped and overcrowded schools, lower per-pupil expenditures, and schools that have limited basic resources and are sometimes understaffed.³⁶

The Children's Defense Fund report *Latino Youth at a Crossroads* provides evidence concerning the consequences for Latinos of being increasingly concentrated in segregated schools, which are found primarily in low-wealth districts.³⁷ Briefly stated, in those schools the quality of the teachers is lower, for example, they have less experience and education, and fewer resources, such as equipment and facilities, are available.

To be sure, the socioeconomic status of a child's family influences whether he or she will attend schools of poor quality, and to that extent captures some of the environmental factors discussed above. Nevertheless, the integration of research addressing the independent effect of these structural forces on the educational achievement of Latinos with status attainment research is needed.

Social psychological, cognitive, and socialization factors also play an important role in predicting education over and above family background. These findings are impor-

tant in light of the fact that both parental expectations concerning college attendance and an individual's occupational aspirations are only weakly correlated with family income or parental education ($r < .20$).

A key finding of this study concerns the dramatically lower figure for educational attainment of Puerto Ricans that emerges in the regression analysis. As the descriptive tables show, according to census data, when comparing groups of Latino men of the same age on the basis of ethnicity, the educational achievement of Puerto Ricans appears to far exceed that of Mexican-origin men. While only one-half of Mexican men complete four years of high school or more, a full three-quarters of Puerto Ricans do so. Even comparing only those men who resided in the United States by at least age 17, there is virtually no difference in the high school completion rates of these two groups. However, when Puerto Ricans and Mexicans are compared controlling for generational status in the continental United States in addition to other socioeconomic indicators, Puerto Rican men actually obtain a full year less schooling.

In sum, the model in this study effectively captures the structural opportunities and constraints faced by Latino men insofar as their socioeconomic background is concerned. In addition, it sheds some light on the processes that mediate the influence of family background on educational attainment, namely, social psychological attributes, cognitive skills, parent socialization, and timing of immigration and generational status. At the same time, it motivates many questions about other social structural dynamics that operate to shape the education of Latinos. ■

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Notes

1. Howard N. Fullerton, Jr., "The American Work Force, 1992–2005: Another Look at the Labor Force," *Monthly Labor Review* 116, no. 11 (November 1993): 31–40; U. S. Department of Labor, Bureau of Labor Statistics, *The American Work Force: 1992–2005*, Bulletin No. 2452 (Washington, D.C.: Government Printing Office [hereafter GPO], April 1994).
2. U.S. Bureau of the Census, *The Hispanic Population in the United States: March 1989*, Current Population Reports, Series P-20, No. 444 (Washington, D.C.: GPO, May 1990).
3. Reynolds Farley, "Blacks, Hispanics, and White Ethnic Groups: Are Blacks Uniquely Disadvantaged?" *American Economic Review* 80, no. 2 (1990): 237–241.
4. Gregory Acs and Sheldon Danziger, "Educational Attainment, Industrial Structure, and Male Earnings through the 1980s," *Journal of Human Resources* 28, no. 3 (1993): 618–648.
5. Sandra K. Danziger and Sheldon Danziger, "Child Poverty and Public Policy: Toward a Comprehensive Antipoverty Agenda," *Daedalus* 122, no. 1 (Winter 1993): 57–84; Aletha C. Huston, Vonnice C. McLoyd, and Cynthia Garcia Coll, "Children and Poverty: Issues in Contemporary Research," Special Issue: "Children and Poverty," *Child Development* 65, no. 2 (April 1994): 265–282; Christopher Winship, "Race, Poverty, and 'The American Occupational Structure' (Symposium)," *Contemporary Sociology* 21, no. 5 (1992): 639–643.

6. Robert Aponte, "Hispanic Families in Poverty: Diversity, Context, and Interpretation," *Journal of Contemporary Human Services* 74, no. 9 (1993): 527–537; Douglas S. Massey, "Latinos, Poverty, and the Underclass: A New Research Agenda," *Hispanic Journal of Behavioral Sciences* 15, no. 4 (1993): 449–475; Joan Moore and Raquel Pinderhughes, eds., *In the Barrios: Latinos and the Underclass Debate* (New York: Russell Sage Foundation, 1993); Alejandro Portes and Zhou Min, "Gaining the Upper Hand: Economic Mobility among Immigrant and Domestic Minorities," *Ethnic and Racial Studies* 15, no. 4 (1992): 491–522.
7. Larry D. Schroeder, David L. Sjoquist, and Paula E. Stephan, *Understanding Regression Analysis: An Introductory Guide*, Sage University Paper Series on Quantitative Applications in the Social Sciences, Series No. 07-001 (Beverly Hills: Sage Publications, 1986).
8. Winship, "Race, Poverty, and 'The American Occupational Structure.'"
9. Robert D. Mare, "Social Background and School Continuation Decisions," *Journal of the American Statistical Association* 75, no. 370 (1980): 295–305; Neil Fligstein and Roberto M. Fernandez, "Educational Transitions of Whites and Mexican-Americans," in *Hispanics in the U.S. Economy*, edited by George J. Borjas and Marta Tienda (Orlando, Fla.: Academic Press, 1985); William Velez, "High School Attrition among Hispanic and Non-Hispanic White Youths," *Sociology of Education* 62 (April 1989): 119–133; Robert D. Mare and Christopher Winship, "Ethnic and Racial Patterns of Educational Attainment and School Enrollment," in *Divided Opportunities: Minorities, Poverty, and Social Policy*, edited by Gary D. Sandefur and Marta Tienda (New York: Plenum Press, 1988); Vilma Ortiz, "Generational Status, Family Background, and Educational Attainment among Hispanic and Non-Hispanic Youth," in *Latino College Students*, ed. Michael Olivas (New York: Teachers College, 1986); Gary D. Sandefur, Sara McLanahan, and Roger A. Wojtkiewicz, "Race, Ethnicity, Family Structure, and High School Graduation," Institute for Research and Poverty, Discussion Paper 893-89 (University of Wisconsin, Madison, 1989); Marta Tienda, "Sex, Ethnicity, and Chicano Status Attainment," *International Migration Review* 16, no. 2 (1982.): 435–472.
10. Anna M. Santiago, "Residential Segregation and Links to Minority Poverty: The Case of Latinos in the United States," Special Issue on Urban Poverty, *Social Problems* 38, no. 4 (1991): 492–515; Anna M. Santiago, "The Impact of Metropolitan Opportunity Structure on the Economic Status of Blacks and Hispanics in Newark," *Urban Geography* 12, no. 6 (1991): 494–507; Maria E. Enchautequi, "Geographical Differentials in the Socioeconomic Status of Puerto Ricans: Human Capital Variations and Labor Market Characteristics," *International Migration Review* 26, no. 4 (1992): 1267–1277; other research on the effects of community on earnings includes Mary Corcoran, Roger Gordon, Deborah Laren, and Gary Solon, "Effects of Family and Community Background on Economic Status," *American Economic Review* 80, no. 2 (1990): 362–366.
11. Mary Corcoran and Linda Datcher, "Intergenerational Status Transmission and the Process of Individual Attainment," in *Five Thousand American Families: Patterns of Economic Progress*, vol. 9, edited by Martha S. Hill, Daniel H. Hill, and James N. Morgan (Ann Arbor: Institute for Social Research, University of Michigan, 1981).
12. Russell W. Rumberger, "Dropping Out of High School: The Influence of Race, Sex, and Family Background," *American Educational Research Journal* 28, no. 4 (1983): 199–220.
13. Christopher Jencks et al., *Who Gets Ahead? The Determinants of Economic Success in America* (New York: Academic Press, 1979).
14. Mare, "Social Background."

15. Velez, "High School Attrition."
16. Aponte, "Hispanic Families"; Massey, "Latinos, Poverty, and the Underclass"; Moore and Pinderhughes, *In the Barrios*; Portes and Zhou, "Gaining the Upper Hand."
17. Velez, "High School Attrition"; Rumberger, "Dropping Out of High School."
18. Jorge Chapa, "The Myth of Hispanic Progress: Trends in the Educational and Economic Attainment of Mexican Americans," *Harvard Journal of Hispanic Policy* 9 (1990); Ortiz, "Generational Status."
19. Chapa, "The Myth of Hispanic Progress."
20. Ortiz, "Generational Status."
21. Harriet Romo, "Contrasting Perceptions of Schooling among the Mexican Origin Population," in *Mexican Immigrants and Mexican Americans: An Evolving Relation*, edited by Harley L. Browning and Rodolfo O. de la Garza (Austin: University of Texas Press, 1986).
22. Lloyd H. Rogler and Rosemary Santana Cooney, *Puerto Rican Families in New York City: Intergenerational Processes* (Maplewood, N.Y.: Waterfront Press, 1984), 141.
23. Center for Human Resource Research, *The NLS Handbook, National Longitudinal Surveys of Labor Market Experience* (Columbus: Ohio State University, Center for Human Resource Research, 1991).
24. Ronald R. Rindfuss, "The Young Adult Years: Diversity, Structural Change, and Fertility," *Demography* 28, no. 2 (1991): 493-512.
25. Duane F. Alwin and Arland Thornton, "Family Origins and the Schooling Process: Early versus Late Influence of Parental Characteristics," *American Sociological Review* 49 (December 1984): 784-802).
26. Telephone conversation with Dr. Greg Duncan, Institute for Social Research, University of Michigan, July 11, 1992.
27. U.S. Bureau of the Census, *Educational Attainment in the United States*, Current Population Reports, Series P-20, No. 451 (Washington, D.C.: GPO, 1991).
28. U.S. Bureau of the Census, *The Hispanic Population*, May 1990 (see note 2).
29. George J. Borjas, *Friends or Strangers: The Impact of Immigrants on the U.S. Economy* (New York: Basic Books, 1990).
30. Vilma Ortiz, "Changes in the Characteristics of Puerto Rican Migrants 1955 to 1980," *International Migration Review* 20, no. 3 (1986): 612-628.
31. Clara E. Rodriguez, *Puerto Ricans Born in the U.S.A.* (Boulder, Colo.: Westview Press, 1991).
32. Ortiz, "Changes in the Characteristics of Puerto Rican Migrants."
33. Chapa, "The Myth of Hispanic Progress."
34. Frank D. Bean and Marta Tienda, *The Hispanic Population of the United States* (New York: Russell Sage Foundation, 1987); Rodriguez, *Puerto Ricans Born in the U.S.A.*

35. David L. Featherman and Robert M. Hauser, *Opportunity and Change* (New York: Academic Press, 1978).
36. Angela L. Carrasquillo, *Hispanic Children and Youth in the United States: A Resource Guide* (New York: Garland Publishing, 1991), 99.
37. Children's Defense Fund, *Latino Youths at a Crossroads*, an Adolescent Pregnancy Prevention Clearinghouse Report, ISSN: 0899-5591 (Washington, D.C., 1990).

Latino Students' Academic Literacy in Science Education

Contextualizing Policies

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This article reviews various interpretations of academic literacy that are being applied to science education, their limitations in terms of Latino students, and the case study experiences of three Latino students majoring in science. The author examines the ways in which factors he has identified in his experiences and research as crucial can be integrated to improve academic literacy programs. He recommends to planners of science programs methods to effect advancement in Latinos' academic performance.

I ncreasing minority participation in science is a major initiative undertaken by the U.S. government and private industry. Widespread concern has been amply documented in books and reports such as *Science and Technology Education for the Elementary Years*, *Changing America*, *Science for All Americans*, *In the National Interest*, *The Liberal Art of Science*, and *What Works*.¹ On the whole, these reports emphasize the importance of integrating in science underrepresented minority groups, particularly members of the Hispanic² and African-American communities. Yet little has been said about nonnative English speakers who are limited English proficient (LEP) — one of the fastest growing populations in American colleges.

During the 1991–1992 school year, according to the 1994 Aspira Institute for Policy Research report, there were 2.31 million LEP students in the United States, three-quarters of whom spoke Spanish as their first language. Forty-five percent of school districts with LEP students reported offering no instruction in the native tongue, a situation that helps explain why such students fall behind as they struggle to learn English.

Despite the concern and the initiatives cited above, statistical data published in *Science and Engineering Degrees* indicate that the measures undertaken have not been successful in integrating Latino students.³ In 1977, 2.9 percent of all bachelor's degrees in science and engineering were awarded to Latinos, down from 4.14 percent in 1990. The total number of master's degrees in the sciences awarded to Hispanics was 2.7 of the total, down from 2.8 in 1990. Even with this slight increase in 1990, the number of science degrees granted does not correspond to the actual growth of the Hispanic population. According to the Census Bureau, the 1990 Hispanic population numbered 22.4 million, which represents 9 percent of the total U.S. population — 10 percent if Puerto Ricans are included — yet the paucity of numbers of Latinos in science speaks for itself.

As a participant in government programs directed at increasing the involvement of Hispanics in science and technology, such as the Foundation for the Improvement of

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— Raimundo Mora

Postsecondary Education and the National Science Foundation, I realized that a main impediment to Latino students' entering and succeeding in science programs was their lack of a high level of English proficiency and background knowledge in science.

In fourteen years of teaching limited-English-proficient students, I have consistently found that we cannot separate language from content. For these students to acquire the language and knowledge they need to be successful in college, they have to bridge existing gaps between the education they bring from home with the requirements of U.S. universities. The more distant their familiar discourses from those of academia, the harder it is for them to acquire such knowledge. This extended process involves linguistic, cultural, and socioeconomic factors that scholars, educators, and policymakers all too frequently ignore. This conviction has led to my documentation of the academic literacy of students and my research of factors present in a community and a four-year college.⁴

In this article, I review some interpretations of literacy and expand these definitions beyond the coding and decoding of texts. I also examine how literacy integrates factors I have identified in my experience and research as crucial. To illustrate the interaction of these factors in the learning of academic literacy in English by selected students who are representative of two groups of Latino students whose primary language is Spanish, I use three case studies. By combining the theory of literacy with the case studies, I suggest ways to improve the programs that serve these students. I follow Freire's reminder that one of the main challenges of intellectuals in higher education is to be consistent in discourse and practice.⁵

In "Literacy in a Preparatory Science Course," I illustrate the gap between the literacy expected from students in an introductory science course and the literacy of a group of Latino students. In "Jesús" and "Ana," I depict the literacy of two groups of students that I have identified, with the help of Rutgers teachers, administrators, and counselors, as representative Latino students who are majoring in science. Jesús represents students who, starting college, do not have a strong foundation in science or academic skills in either their first or second language. Ana, on the other hand, represents students who are competent in English and Spanish and have a good background knowledge in science. Finally, I recommend methods through which science programs seeking to improve the academic performance of these students can become more effective.

I initiated the case studies in the 1994 Academic Foundations Center (AFC) summer program (see Appendix A) conducting joint interviews with Maria, a teacher in and the coordinator for the AFC's preparatory science courses, and Sam, another teacher; I interviewed selected students in separate sessions. Audiotaping the interviews, I then transcribed and organized them according to theme. I also analyzed lab reports by some of the students enrolled in the course, following principles of ethnographic research.

I use case studies because I believe that qualitative research and particularly ethnography is the proper approach for studying learners and the contexts in which they use literacy. Since case studies of selected students are a vital tool for bridging discourse and practice, they have strong implications for policymaking. According to Renato Rosaldo,

The truth of objectivism — absolute, universal, and timeless — has lost its monopoly status. It now competes, on more nearly equal terms, with the truths of case studies that are embedded in local contexts, shaped by local interest, and colored by local perceptions. The agenda for social analysis has shifted to include not only eternal verities and lawlike generalizations but also political processes, social changes, and human differences. Social analysis must now

grapple with the realization that its objects of analysis are themselves analyzing subjects who critically interrogate ethnographers — their writings, their ethics, and their politics.⁶

Defining Literacy

Many attempts have been made to expand the concept of literacy beyond the traditional coding and decoding of words in order to better understand the complexities involved in teaching and learning literacy. These studies have emphasized the importance of two factors: the individual traits of the subjects whose literacy is defined and the contexts in which they have to use it. While some research has been conducted along these lines on first-language literacy, little attention has been paid to the acquisition of academic literacy by Latino students whose first language is Spanish.⁷

According to Donaldo Macedo, literacy cannot be viewed as simply the development of skills aimed at acquiring the dominant standard language.⁸ He rejects traditional approaches to literacy and argues that they have become ingrained with a positivistic method of inquiry, leading to the abstraction of methodological issues from their ideological context; consequently, they ignore the relationship between the sociopolitical structures of a society and the act of reading. These approaches tend to lead practitioners to blame students when they fail to acquire literacy, rather than looking for explanations in the differences between the use of language in school and in the students' communities.

Johns, who documented what some faculty called "ESL [English as a second language] students' academic illiteracy," classified such illiteracy within the following areas: a lack of background knowledge; problems with interpreting and producing the macro purposes of texts; lack of planning in approaching reading or writing; a lack of "conceptual imagination"; a lack of essential vocabulary; the students' "unwillingness to be objective about their value system."⁹

I use this definition of illiteracy because it points out through contrast how a group of college professors view academic literacy and what they expect from their students. At the same time, I question its use of a deficiency model that has been historically employed to discriminate against immigrant speakers of languages other than English.

Academic literacy is an integral part of education. It is understood by those who advocate the widely accepted education concept that language instruction should be integrated with all aspects of the curriculum because language is essential to learning the knowledge represented in the curriculum. However, this concept has not been integrated into the curricula of most universities, where students' academic literacy is generally addressed only through a sequence of two English composition courses.

A multicultural approach to literacy promotes integrative processes. It seeks to give voice to those who may have previously been silenced, a silencing that occurs most specifically in the context of schooling.¹⁰ Those who adopt this approach recognize that success or lack of success in school and the failure to learn to read and write may be more directly related to the distance between the discourse of the learner and the discourse of the school.

Literacy signifies control over secondary discourses beyond the primary discourse that we use to communicate orally with our immediate family. As a result, there are as many applications of the word *literacy* as there are secondary discourses, of which the scientific discourse is one. An implication of this interpretation is the great advantage of

one's secondary discourse being compatible with the primary one. Abundant research shows how mainstream middle-class children acquire secondary literacies through experiences at home, both before and during school, and how in school they practice a discourse they have acquired at home.¹¹ In contrast, many school-based secondary discourses conflict with the values and viewpoints in some nonmainstream children's primary discourses and in other community-based secondary discourses.¹² Farr documents that for some workers "to function in one's society" frequently means filling out forms and answering questionnaires.¹³ Students who come to college from settings in which literacy is defined in these terms tend to be unaware of the purpose of academic literacy, which leads to frequent conflicts between teachers and students.

Literacy in a Preparatory Science Course

The preparatory science course I studied was one component of a program designed for incoming students who were underprepared in science, mathematics, and English. The intent was to provide them with foundations in science that would help them succeed in college-level courses. Students were expected to learn about physics, biology, chemistry, and geology and were required to conduct one or two experiments in each field. For each experiment, they had to write a lab report and enter data in a book. According to the program coordinator, writing for this class followed conventions of the scientific world. Students needed to understand concepts and processes and write about them. They took notes from lectures, readings, and observations, recorded data, and wrote laboratory reports.

Both Maria and Sam commented that most of the students obviously did not know how to type, because their reports contained so many typos. Sam said that many students spaced inconsistently, switching from single to double, and even triple, spacing in the same report. He added that the students used a great amount of whiteout fluid to correct their mistakes, which made reading their reports very difficult.

Maria thought that students frequently did not make sense in their reports because they used words without understanding the concepts behind them. She explained that students who did not understand the point of an experiment had a hard time recording their data. Therefore, they wrote either unordered numbers in any way or whatever they thought would please the teachers. "Some students did not even write a narrative. They just presented the data, tables, and graphs." Maria also explained that students were unfamiliar with many conventions of writing and encountered many problems with the format of their texts. Both teachers pointed to the fact that the students did not know how to organize and present tables and graphics.

According to Sam, the grammar and punctuation in the reports affected the students' grades negatively. He found many incomplete and unclear ideas. When I asked him what the students had done to correct their errors, he replied that they didn't have time to do that because their schedules were tight. As soon as they finished one laboratory report, they had to prepare the next one.

Maria said that although students received instructions weekly on how to use the library, "they did not get to the point at which they could apply their library work to their writing assignments." She explained that in one of the experiments, few students had copied accurately from various sources how bacteria grew and what they grew on, what their nutrition was, and how they reproduced. She continued, "They did not include their sources, which is something they are expected to do in a college-level science

course. They also have to learn how to paraphrase so that they have an adequate understanding of the texts they study and do not plagiarize.”

In examining the lab reports, I found the same grammatical problems the teachers had pointed out: fragmentary and run-on sentences, inconsistency of verb tenses, and a lack of parallelism. Although some of the native-Spanish-speaking students tended to translate word for word from Spanish into English, I still found inconsistencies in the reports. Some demonstrated different levels of English proficiency from one section of their reports to the next. Without acknowledging sources, students seem to have copied in their methods sections the teachers’ instructions from handouts and material from other sources. The discussion and conclusion sections tended to be very short and contained more of the students’ own writing. Sometimes the conclusion consisted of only one sentence or there was a discussion but no conclusion or vice versa. Some reports contained hardly any text: just a few sentences, a table, and a graph. I also noticed a lack of coherence in the reports, partly because most students appeared to have omitted details of an experiment that they assumed the readers already knew.

The difficulties encountered by students in writing these reports was voiced by Jesús, an articulate student with rather limited academic skills in English. He said that he had a very hard time writing the reports because he could not focus on the conventions of academic English while he was trying to understand the experiment.

Maria commented that by the time science majors enter their third year, they are expected to write fifteen-page research papers; they should know what information they need, where to find it, and how to convey it to their readers. She emphasized that because the instructors did not have time to teach all these skills in one preparatory course, the students would have to acquire these skills by themselves. This is exactly what happened to Jesús.

Jesús

Jesús, a nonnative English speaker, was a student in the science preparatory course. According to his teachers, he was representative of bright students who wanted to major in science but had difficulties with the content of the science preparatory course. I interviewed Jesús during the 1994 summer and fall terms.

As teenagers, Jesús’ parents had emigrated with their families from Puerto Rico to the Lower East Side of New York, where they met and married. Jesús, who was born in 1974, grew up as a native Spanish speaker. His parents and their relatives and friends spoke only Spanish. Jesús and his parents lived with his mother’s parents from the time he was born until he was five. In 1979 they moved to Newark, where Jesús started kindergarten and began to learn how to read and write in English. Three years later, when he was in second grade, his parents separated and his mother moved back to Puerto Rico. Jesús went to live with his grandparents on the Lower East Side, where he attended third grade.

One year later, his mother took him to Puerto Rico, where he was placed in the third grade of a public school in Hormigueros, a small town on the west coast. He had to repeat third grade because of his limited Spanish proficiency. He explained, “To learn how to read and write in Spanish was difficult because the teachers didn’t help me. I think they didn’t like me. I was always in trouble . . . disciplinary problems. Mother had to come constantly to school to speak with the teachers. Then, I learned to put on the nice face.”

When I asked him to explain what “to put on the nice face” meant, he said that he had to learn how to be more obedient, to behave more respectfully in class, and not to speak English. Apparently he was having problems learning not just academic skills in Spanish, but also norms of appropriateness different from those of New York and Newark. By the time he was in tenth grade, he seems to have adapted well to the Puerto Rican environment:

“By tenth grade, I started to do well, especially in chemistry and physics. I liked to do all the experiments. Sometimes I stayed after class until I finished doing them. The teacher told me that I had a natural disposition for science, so I decided that I wanted to become a scientist.”

By the time Jesús finished tenth grade, his mother had remarried and moved back to Newark with her new husband. Since his mother and stepfather worked and there was nobody to take care of him in Newark, Jesús again went to live with his grandparents on the Lower East Side. He repeated the tenth grade because of his limited English proficiency, an experience he describes as follows:

At home we spoke Spanish and in school we had to speak English. Since I spoke little English, I just sat quietly in class. For me, school was like a different world. The building of the school was like an American fortress in the middle of the jungle. Outside there was dirt and a lot of crime. Inside, the school was clean and shiny. They frisked us every day before entering school to make sure we weren't carrying weapons.

One year later his mother took him with her to Newark, where Jesús completed eleventh and twelfth grades. About this change, he said:

I could not follow the classes. I was under a lot of pressure. Fortunately, my teacher in Newark spoke with the principal and transferred me to the bilingual program. I didn't like being separated from the other kids but I liked that in this program there was a teacher who helped me with my English. This teacher started to spend her lunchtime with me. During lunch, we discussed readings that she had given me in advance. On Fridays she gave me lists of words that I had to define and then use in sentences that I had to compose during the weekend.

After coming back from Puerto Rico, he had started seeing his father, who had just married a native English speaker. When he saw them, his father and stepmother spoke to him in English so that he could practice. By twelfth grade, he said, he started to feel comfortable speaking English. This did not mean, however, that he could read and write in English.

Jesús said that he had problems in school because nobody encouraged him to study at home. But by the time he entered eleventh grade, he started to enjoy success. He attributes it to his competition with Pablo, his best friend. He explained that at the same time as they competed against each other for better grades, they helped each other to find more efficient ways of studying, organizing information, and concentrating.

Jesús entered Rutgers University in the summer of 1994 through the Educational Opportunity Fund (EOF) program (see Appendix A) of the Academic Foundations Center. Since his parents did not have enough money to pay for his tuition, EOF started to pay for the portion of the tuition that was not covered by federal and New Jersey financial aid. He also received a student loan so that he could live in the university dor-

mitories, where he has been since the fall of 1994. At the end of the fall semester, he applied for a scholarship to the Minority Biomedical Research Support (MBRS) program (see Appendix A), which he expects to enter in the fall of 1995. Meanwhile, he is taking basic science courses as well as English as a second language. His limited academic skills, however, are interfering with his performance in the science courses. For example, Jesús said that the teacher of the general biology course had given him a C because he had outlined an answer to the exam rather than written an essay. He concluded that he needed to learn how to write well and that because he now had a stable life he was going to be able to focus on his writing.

Ana

By the time I wrote this case study, Ana had finished her B.S. at Rutgers University in Newark and was offered a scholarship by the MBRS program to work on her Ph.D. However, she was hesitant to accept it. Ana was born in San Juan, Puerto Rico, where she attended elementary and secondary school in a private institution and two years of college in a private university. Before moving to Newark, Ana lived with her family, which consists of her parents, three sisters, and two brothers. Her father, a physician, supported Ana while she lived in San Juan. Ana explained that she decided to transfer to Rutgers because she wanted to attend a university with a good biology department. Her sister, who was at Rutgers completing a degree in political science, recommended Ana to the director of the MBRS program, who gave Ana a scholarship as soon as she was admitted to Rutgers because of her good grades and high scores in the placement tests. Ana described the MBRS program as follows:

When you are in the MBRS program you get a job. When you are accepted you are given a brief description of the researchers who need assistants and a brief description of what they do. You send your package to these researchers, and they select the applicant or applicants they want to work with. In addition, you get six hundred dollars to travel. That's why I could go to present [a paper] at a neuroscience conference in California.

The MBRS scholarship covered her tuition and paid her a salary to work in a laboratory of the Neuroscience Center. During the past two years she has also been working as a tutor for the Academic Foundations Center. In addition, her father has partially supported her.

The transition from one university to another seems to have been smooth in part because Ana had good foundations in mathematics and science. She explained that she had acquired these foundations while studying in Puerto Rico and that although she had learned them in Spanish, she could transfer her knowledge to English with no difficulty. She admitted, however, having problems with some terminology used by professors in the science courses during the first year. In her own words:

At the beginning, I thought that it was going to be difficult for me to follow science classes conducted in English. However, I discovered that since I was familiar in Spanish with most of the concepts we dealt with in class, I only needed to know the equivalent words in English, which were not so many. It was only in the courses of neuroscience that I felt a little lost. I was not familiar

with some concepts and vocabulary used by professors in this area, so I needed to read about the brain. I also read articles recommended by the teachers in the department. Gradually, I became familiar with their way of talking.

When asked about her writing in science courses, Ana said that by the time she finished English 102, she felt confident writing reports and expository essays in the science courses she took. She explained that she had learned to write scientific reports during her two years of university in Puerto Rico. Ana had also studied English in high school and taken intensive English classes afterward for two years before coming to the United States. During her first year at Rutgers, she took English 101 and 102, the composition courses that all students are required to complete.

After describing the MBRS program, Ana added that Professor Bako, the researcher who was her mentor, had been very helpful during her undergraduate studies. She explained that he had helped her a great deal to understand concepts and assignments that had presented difficulties in her work as a research assistant and in her science courses.

In one of our last interviews, Ana spoke about how hard it had been for her to adapt to the environment of Rutgers University. She complained that she had not been able to make friends among classmates or coworkers. Although she lived with her sister Patricia, the two seem not to spend much time together. During the four years of undergraduate studies, Ana spent most of her time in the university either taking classes, studying in the library, or working in Professor Bako's laboratory. Ana said that in Puerto Rico students studied in groups and helped one another with assignments, but at Rutgers students worked individually and there was no emotional support. Apparently, this was a serious problem for her. She insisted that I write about how, although she had found her studies intellectually stimulating, she was hesitant to continue because of the isolation she experienced in this environment. She said that she missed working with people who spoke Spanish and shared her culture. It remains to be seen to what extent the cultural isolation and lack of affective support by the scientific community in the university will influence her decision about graduate studies.

Discussion

Ana did not have to take a preparatory science course like the one I required of Jesús. Therefore, what is taught and learned in such a course reveals the kinds of skills and knowledge that students like Ana have, and students like Jesús are expected to have, to succeed in science courses. It also highlights pedagogical issues, such as the need to integrate language instruction into the science curriculum, which would require many more hours of class or coordinating science instruction with ESL classes. The student needs documented in the description and analysis of this course are better understood when they are analyzed against the context of the educational processes of Jesús and Ana.

Jesús has not had many opportunities to develop his academic skills consistently in either English or Spanish. His acquisition of English was interrupted by his move to Puerto Rico. Eight years later, his development of those skills in Spanish was interrupted when he and his mother moved back to Newark. Ana, on the other hand, had the opportunity to develop her academic skills in Spanish and use them to learn science foundations. Later she was able to transfer them into English. This transference is explained by the threshold hypothesis discussed by Cummins, whereby the knowledge

of the first language allows one to reach a threshold that allows for learning the second language.¹⁴

The cases of Jesús and Ana speak to some of the literature reviewed here, which suggests that the more distance there is between the language and discourse familiar to students and the language and discourse used in school, the more difficult it is for students to learn a subject. Even if Jesús had been born in the United States, he would not have had enough opportunities to participate in speech communities that include academic discourse. The fact that Ana's father was a physician probably made Ana familiar with scientific discussion at home. In addition, her middle-class upbringing makes it likely that in her home she acquired reading and writing skills compatible with those used in school. According to the research above, middle-class children acquire secondary literacies through experiences at home before and during their school years.

Research continues to find differences in dropout rates between socioeconomic groups. In 1992, according to the Aspira Institute for Policy Research, 44.7 percent of Latino students between the ages of sixteen and twenty-four from low-income families dropped out, compared with 25.2 percent from middle-income and 9.6 from upper-income families.¹⁵ In the same year, more than half (52%) of all Puerto Rican children lived in poverty. In 1990, 37 percent of Hispanic children whose parents had a grade-school education or less lived in poverty, compared with 19 percent whose parents were high school graduates and 14 percent whose parents had continued their education beyond high school. Thus, there is a direct correlation between the education of these children's parents and their levels of poverty.

The academic difficulties in English and science that beset Jesús also seem to be rooted in his school changes. Most of his efforts in school seem to have been directed toward adapting to the different environments of Newark, New York, and Puerto Rico. His situation, however, is not unique. From 1897 to the 1960s, the U.S. government's language policy for Puerto Rico was mainly to increase the use of English on the island. A reverse migration brought thousands of children who were not proficient in Spanish back to Puerto Rican schools.

By the time Jesús went to live in Puerto Rico, the Department of Education had identified 78,041 students who had returned from the United States and required special Spanish-language instruction. They accounted for 11 percent of the island's total public school enrollment.¹⁶ The 1978 amendment to the Federal Bilingual Education Act allowed Puerto Rico to serve the needs of students with limited proficiency in Spanish. This effort failed for a number of reasons, including inconsistent funding and a lack of prepared teachers, according to the Inter-American University. When its report was issued, only 10 percent of these students were receiving adequate instruction in English or Spanish as a second language. According to Llabres de Chameco, many returned migrants speak English well but do not read or write it. Some speak street Spanish well but do not read or write it.¹⁷ This description fits Jesús.

The experiences of returned migrants with Spanish was similar to those faced by their parents in learning English on the mainland. Both groups were forced to study in a language that most of them did not understand and in which they were misunderstood by classmates, teachers, and administrators unprepared to deal with their needs.

While most studies of returned migrants have focused on the problems they face in acquiring academic literacy in Spanish and adapting to the island environment, little has been said about what happens to the learning process of students who, like Jesús, return to the mainland years later to continue their studies in English.

When I started to interpret my data about Jesús, I found that in Jesús' education there have been support communities and speech communities that were instrumental in his acquisition of literacy: the Bilingual Education program in secondary school, the EOF/AFC and MBRS programs in college. These communities provided the context for him to learn academic language and content. While they supported him along his way, it seems that he will need more of such help to achieve his educational goals.

While growing up, Jesús and Ana participated in a variety of speech communities, which are defined in functionalist terms by Sherzer as systems of organized diversity held together by common norms of speaking and aspirations.¹⁸ In New York City, where Jesús lived twice, he participated in two speech communities: English in school and Spanish at home and with friends. In Puerto Rico, he had to learn the norms of the language used in Hormigueros, where he was discouraged from speaking English. In Newark, he participated in at least three speech communities. In school and in his father's home, he was expected to speak English, and at home both Spanish and English. Jesús' speech communities did not include academic discourse. In Puerto Rico, Ana used Spanish at home and school and English only in school. The use of language in these two settings seems to have been consistent. Also, she was probably exposed to a scientific community at home, in high school, and at the University of Puerto Rico. Participating in the MBRS program as soon as she entered Rutgers gave her the opportunity to learn a new scientific language and to practice in English the scientific dialogue she had acquired in Spanish.

Schumann states that how well and how fast students learn a discourse depends significantly on social factors such as intergroup relations.¹⁹ Jesús is now expected to command a scientific terminology to perform successfully in his science courses. To learn it, he has to find ways to participate in settings where it is used. Relationships like those he established with his friend Pablo and his science teacher in Puerto Rico allowed him to advance intellectually. Now he has to find their counterpart in the university. Vygotsky noted that the cooperation between students and their teachers, or peers who function as teachers, is central to students' cognitive development.²⁰ From this perspective, failure may be blamed on a social system that does not provide linguistic minority students with the appropriate social interactions necessary for their social development.

Jesús still has a long way to go. He is participating in ESL classes, which are helping him improve his academic skills in English. At the same time, he is taking preparatory science courses that are helping him build the background knowledge he will need. When he leaves these classes in approximately one year, he might qualify for a scholarship in the MBRS program.

Ana did not have to take preparatory science courses at Rutgers but is finding it hard to cope with isolation and cultural alienation. She seems to need a way of integrating her studies, her work, and her life so that she can find the strength necessary to pursue graduate studies.

Contextualizing Policies to Increase the Participation of Latino Students in Science

The low representation of Latinos in higher education science programs documented at the beginning of this article indicates that there is a need to increase the enrollment of Latino students in science programs while improving the retention rate of those already

enrolled. To achieve this dual goal, we have to establish a clear policy for the design of appropriate curricula and support services, which requires the following: (1) a careful assessment of student needs; (2) an accurate definition of academic literacy; (3) an integration or coordination of language and content instruction; and (4) an evaluation of approaches to teaching language and science that permit us to achieve realistic goals.

1. An effective assessment of Latino students should take into consideration their language proficiency and education in their first and second languages. Assessment of the language and knowledge of Latino students is usually conducted only in English. Research in second language acquisition has shown that the knowledge acquired in one language can be transferred to another. Likewise, the literacy acquisition process in a second language by those who have reading and writing skills in their native language usually speeds up once they reach a level of English proficiency at which they can transfer their academic skills from their first to their second language.

2. We need to specify the contexts in which students are going to use the acquired literacy. We need to define better specifically what students must know and design curricula accordingly. This, in combination with accurate assessment, can help us bridge the gap between the knowledge and skills of students and the academic standards of universities. Interpretations of the literacy of linguistic minorities that view literacy only as a set of skills that students must command, ignoring socioeconomic, cultural, and circumstantial components, often simplify the complex social issues and hide the social inequalities at the root of their illiteracy.

We need to envision academic literacy beyond its skill-oriented focus and include the social, cultural, and economic dimensions of students' lives as the framework for literacy. To the degree that we are able to integrate such an orientation, we will either continue to disable students with limited English proficiency, as Cummins contends, or empower them through their own processes.²¹

3. An educational approach that considers language alone and ignores content is inadequate to the needs of LEP students. Mohan believes that the task of devising a policy for the integration of language and subject calls for the development of a more integrated model of learning.²² Such a model should provide a theoretical background and guidelines for educational policy.

To improve the retention of Latino students who are limited English proficient, we must pay closer attention to the role that language plays in teaching and learning in evaluating students' academic performance, in the social interactions that take place in school settings, and in the way schools and classrooms are organized. Not every school has set itself the task of devising a policy adequate for integrating language instruction and curriculum.²³

Language and subject matter are usually considered in isolation from each other, and many educators treat them separately. Some bilingual programs integrate language instruction and content in elementary and secondary education. But these programs are becoming rare because of a national tendency to equate bilingual education and English as a second language. Bilingual programs in higher education are exceptional. I know of two: Kean College of New Jersey and Erie Community College address the needs of LEP students by offering science instruction in Spanish. At La Guardia Community College, ESL instruction has been coordinated with courses offered by the Nursing Department.

4. The way science is taught may be one of the factors contributing to the decrease in the number of science majors at a time when college enrollments are climbing.²⁴ Kessler

says that for English to serve as a medium of science learning for nonnative English students, language and science content should be integrated.²⁵

This requires organizing science experiences in ways that foster development of both language and cognitive processes. The authors of *Undergraduate Science Education* conclude that if science instructors are more preoccupied with covering the syllabus than with how much the students understand and learn, many students will do poorly and drop out of these courses or switch to other majors. According to this report, science professors tend to teach the way they were taught, regardless of the heritage of those they instruct.²⁶ In other words, the lecture remains the primary form of instruction. Compared to their colleagues in the humanities, education, and the social sciences, science faculty are much less likely to employ student-centered pedagogy such as cooperative learning and class discussions.²⁷

When one works with limited-English-proficient students, particularly with nonnative English-speaking students, awareness of how much time it takes for them to acquire academic skills and perform in a second language is crucial. In science courses, it may be desirable to dedicate more time to developing academic literacy. This would give teachers more time to focus on helping students acquire scientific terminology to learn to use computers, the library, tables, and graphs in ways in which learning is interactive. To address the specific needs of native and nonnative English-speaking students among different socioeconomic groups, we have to grasp the differences in their needs. Underestimating their differences leads us to set quixotic goals that can result in frustration for both students and teachers. The multiple factors that affect the literacy acquisition process of Latino students in science programs point to their need for supportive communities such as the ones I have described. These communities can integrate them into the mainstream science programs by both encouraging them to use their learning sources and exposing them to the scientific dialogue and knowledge expected from them in the field of science. My four recommendations seek to promote their integration into mainstream science programs. First, a holistic and accurate assessment of Latino students permits us to learn about these students' complex realities. This knowledge is necessary to understand the differences between the standards of the university and the students' academic skills and background knowledge. Then, a realistic examination of literacy acquisition processes and the ways language is used in science gives us the extra information we need to design curricula that meet students' needs. Finally the integration of language and content and the selection of appropriate approaches help us ensure that science programs can address students' linguistic and educational needs beyond entry-level courses. ■

Appendix A Sources of Aid

Educational Opportunity Fund (EOF)

The Educational Opportunity Fund was established by the New Jersey legislature in 1968 to increase access to higher education by providing financial assistance and support services for “needy” New Jersey residents attending the state’s colleges and universities. The program is the most comprehensive of state-funded efforts to eradicate inequality in higher education. The EOF program, which is administered by the New Jersey Commission of Higher Education under the guidance of a board of directors, serves more than twelve thousand students at fifty-eight colleges and universities. Since its inception, EOF has been a major access route to higher education for minority students, twenty-five thousand of them having graduated. Approximately 70 percent of the students enrolled through EOF are black and Hispanic, groups underrepresented in New Jersey’s colleges and universities.

Minority Biomedical Research Support (MBRS) Program

This program, funded by a grant from the National Institutes of Health, was designed to encourage minorities to enter biomedical research careers by offering a hands-on learning experience. Both undergraduate and graduate students are assigned as research assistants to professors and are encouraged to coauthor scientific reports and present their findings at the Conference of the National Institute of General Medical Sciences and other scientific meetings. Eligibility for the program is determined by ethnic origin (African-American, Latin American, Native American, and Pacific Islander), legal status (U.S. citizen or legal alien), and grade-point average (3.0 or better). The retention rate is estimated at 85 percent, and there have been eighty graduates since the 1984 inauguration of the program at the Rutgers-Newark campus.

Academic Foundations Center (AFC)

The Academic Foundations Center of Rutgers University in Newark admits underprepared students who have the potential to succeed in college but do not meet traditional academic criteria to enter Rutgers. Most of its students enroll through the EOF program, which provides funding for scholarships and for a good part of the AFC infrastructure. The AFC, which provides a summer college-readiness program for incoming freshmen, also offers developmental courses in English, mathematics, and science. Advisement, counseling, tutoring, and student activities round out the services this center offers throughout the four years of study. Additional services available to nonnative English students include ESL courses during the summer and academic year, bilingual counseling, and bilingual tutoring. This center creates a sense of community among its participants, which eliminates some of the alienation Latino students experience in college.

Notes

1. R. W. Bybee, *Science and Technology Education for the Elementary Years: Frameworks for Curriculum and Instruction* (Andover, Mass.: National Center for Improving Science Education, The Network, 1989); *Changing America: The New Face of Science and Engineering*, Final Report of the Task Force on Women, Minorities, and the Handicapped in Science and Technology (Washington, D.C., 1989); *Science for All Americans: A Project 1061 Report on Literacy Goals in Science, Mathematics, and Technology* (Washington, D.C.: American Association for the Advancement of Science, 1989); *In the National Interest: The Federal Government in the Reform of K-12 Math and Science Education* (New York: Carnegie Commission on Science, Technology, and Government, 1991); *The Liberal Art of Science: Agenda for Action: The Report of the Project on Liberal Education and the Sciences* (Washington, D.C.: American Association for the Advancement of Science, 1990); and *What Works: Building Natural Science Communities*, vol. 1 (Washington, D.C.: Project Kaleidoscope, 1991).
2. I use the terms "Hispanic" and "Latino" interchangeably to identify populations of Spanish descent.
3. *Science and Engineering Degrees, by Race/Ethnicity of Recipients: 1977-1990* (Washington, D.C.: National Science Foundation, 1992).
4. R. Mora, "Pragmatic Aspects of Language Used in Three Selected ESL Classes," Ph.D. diss., New York University, 1992; R. Mora, "Academic Literacy of Latino Students," in *Making Invisible Latino Adolescents Visible: Building Upon Latino Diversity*, edited by Martha Montero-Sieburth and Francisco Villarruel (New York: Garland Press, forthcoming).
5. M. Escobar, A. L. Fernández, and G. Guevara-Niebla, with Paulo Freire, *Paulo Freire on Higher Education: A Dialogue at the National University of Mexico* (Albany: State University of New York Press, 1994).
6. R. Rosaldo, *Culture and Truth* (Boston: Beacon Press, 1989), 21.
7. B. M. Ferdman and R. Weber, "Introduction," in *Literacy across Languages and Cultures*, edited by B. M. Ferdman, R. Weber, and A. Ramírez (Albany: State University of New York Press, 1994).
8. D. Macedo, "The Politics of an Emancipatory Literacy in Cape Verde," in *Rewriting Literacy: Culture and the Discourse of the Other*, edited by C. Mitchell and K. Weiler (New York: Bargin and Garvey, 1991).
9. A. Johns, "Faculty Assessment of ESL Student Literacy Skills: Implications for Writing Assessment," in *Assessing Second Language Writing in Academic Contexts*, ed. Liz Hamp-Lyons (Norwood, N.J.: Ablex Publishing, 1991).
10. J. Willinsky, "Popular Literacy and the Roots of the New Writing," in *Rewriting Literacy*.
11. G. Wells, "Preschool Literacy-related Activities and Success in School," in *Literacy Language and Learning*, edited by D. R. Olson, N. Torrance, and A. Hildyard (Cambridge: Cambridge University Press, 1985); G. Wells, "The Language Experience of Five-Year-Old Children at Home and School," in *The Social Construction of Literacy*, ed. J. Cook-Gumperz (Cambridge: Cambridge University Press, 1986); G. Wells, *The Meaning Makers: Children Learning and Using Language to Learn* (Portsmouth, N.H.: Heinemann, 1986).

12. S. B. Heath, *Ways with Words: Language, Life, and Work in Communities and Classrooms* (Cambridge: Cambridge University Press, 1983).
13. M. Farr, "Biliteracy in the Home: Practices among Mexican Families in Chicago," in *Adult Biliteracy in the United States*, ed. Davide Spener (McHenry, Ill.: Delta Systems, 1994), 45.
14. J. Cummins, "The Role of Primary Language in Promoting Educational Success for Language Minority Students," in *Schooling and Language Minority Students: A Theoretical Framework* (Los Angeles: Evaluation, Dissemination, and Assessment Center, California State University, 1987), 37.
15. Aspira Institute for Policy Research, *Facing the Facts: The State of Hispanic Education 1994* (Washington, D.C., 1994).
16. Inter-American University figures, 1983.
17. Amalia Llabres de Chameco, "Bilingual Programs and Plans of the Department of Instruction of Puerto Rico," *Caribbean Review of Bilingual Education* 2 (January–March 1984).
18. J. Sherzer, "Introduction," in *Explorations in the Ethnography of Speaking*, edited by R. Bauman and J. Sherzer (Cambridge: Cambridge University Press, 1974).
19. J. H. Schumann, "The Pidginization Hypothesis," in *Second Language Acquisition*, ed. E. Hatch (Rowley, Mass.: Newbury House, 1978).
20. L. S. Vygotsky, *Mind in Society: The Development of Higher Psychological Processes*, edited by M. Cole, V. Jhon-Steiner, S. Scribner, and E. Souberman (Cambridge, Mass.: Harvard University Press, 1978).
21. J. Cummins, "The Role of Primary Language Development in Promoting Educational Success for Language Minority Students," in *Schooling and Language Minority Students: A Theoretical Framework* (Los Angeles: California State Department of Education, Office of Bilingual Bicultural Education, 1987).
22. B. A. Mohan, *Language and Content* (Reading, Mass.: Addison-Wesley, 1986).
23. M. Marland, *Language across the Curriculum* (London: Heinemann, 1977).
24. *What Works*, vol. 1.
25. K. Kessler, "Science and Cooperative Learning for LEP Students," in *Cooperative Language Learning: A Teacher's Resource Book*, ed. K. Kessler (Englewood Cliffs, N.J.: Prentice Hall Regents, 1992).
26. *Undergraduate Science Education: The Impact of Different College Environments on the Educational Pipeline of the Sciences* (Los Angeles: Higher Education Research Institute, Graduate School of Education, University of California at Los Angeles, 1992).
27. Kessler, "Science and Cooperative Learning for LEP Students."

Beyond Affirmative Action

An Inquiry into the Experiences of Latinas in Academia

Martha Montero-Sieburth, Ed.D.

This article presents a Latina professional's observations of the world of meanings and circumstances that Latina academicians and researchers face in higher education. While they are not represented as a definitive study, because research on underrepresented faculty is sparse and inconclusive owing to the small numbers, they are nonetheless exploratory and critical, rooted in the author's and other Latinas' exposure to academic contexts, forums, and institutes, the scant literature on Latina academicians, and the experiences and reflections of fifteen professional Latinas in higher education. The academic structural obstacles that have constrained the advancement of these women in their professionalization are documented as a means to identify the types of reform policies and research needed in higher education.

This article is essentially a series of observations that I, a Latina professional, have made of the world of meanings and circumstances which Latina academicians and researchers face in higher education.¹ My comments, which are first steps toward a form of inquiry and documentation that identifies the processes and circumstances experienced by Latinas in academia, have implications for the types of public policies required to go beyond the effects of affirmative action programs and diversity commitments. I attempt to understand the individual and interpersonal issues that Latinas share about academia and the ways in which institutions respond to their presence and advancement.

While my observations are general ones, I do not offer them as a definitive study because research on underrepresented faculty is sparse and inconclusive owing to small numbers. Far from being speculative, the observations are exploratory and critical, rooted in my and other Latinas' exposure to academic contexts, forums, and institutes, the scant literature on Latina academicians, and the experiences and reflections of a diverse group of fifteen professional Latinas in higher education with whom I have maintained a close network for more than fifteen years.

The heritage of these women, who range in age from thirty-two to fifty-five, consists of two Mexican, five Chicana, five Puerto Rican, one Argentine, one Honduran, and one Costa Rican. Of the seven who are married, four are in second marriages and have extended families; three are either single or never married and five are divorced; two of them are single parents.

More than two-thirds of them were born in the United States, and the rest immigrated to this country in the past ten to fifteen years. All are bilingual in varying degrees, from

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“Often enough, the experiences of Latinas involve a conflict between the meaning that mainstream academic culture foists upon them and the world view — the social assumptions and obligations that they have inherited as part of their indigenous cultures and traditions. Their role then becomes, at best, that of mediator between two or more worlds of value and meaning. It is a role confounded by incompatible or divergent expectations. A sensitivity to the subjective conflicts that this engenders is therefore vital to a proper understanding of the reasons for underrepresentation.”

— Martha Montero-Sieburth

total speaking and writing fluency in Spanish to passive speaking and writing knowledge of Spanish. Four are dominant English speakers, but they revert to Spanish words if the occasion requires. All have doctorates, Ph.D.'s or Ed.D.'s, with additional coursework and postdoctoral experience. They are spread geographically between the eastern and western coasts of the United States, hold positions ranging from administrative to university teaching and research in private and public institutions of higher learning, and have been at their current positions from three to twelve years.

Of the fifteen, five have tenure, two are at the full professor level, three at the associate professor level, two at the assistant professor level, and three are research associates. Two are top administrators — one is a director of a research think tank, the other a director of bilingual education — and two are consultants — one in preschool education, the other in international education. Two have had Ivy League experience in a tenure (bilingual education) and nontenure (teaching and learning) track. Only one continues at an Ivy League.

The network between these women developed informally as they met at diverse meetings, conferences, and forums. It was natural for them to attend those sessions which dealt with Latino issues and to uncover their common interests. In several instances, a few have worked together on research projects, which has galvanized their relationship. At other times, they have collaborated on presentations and hence have come to understand each other's agenda. Thus, these women have self-selected themselves, as is to be expected given their limited numbers. In that sense, they constitute part of the limited pool of Latina scholars.

While they do not meet among themselves regularly, nor as a group, they do gravitate to one another, particularly at annual conferences, women's studies groups, institutes, and forums. They keep in touch through diverse networks, including bilingual working groups, significant interest groups of their professional organizations, collaborative research grants, and the Internet. Several have helped each other to complete their doctorates, writing letters of recommendation and providing support during promotion and tenure. Yet, as in many academic relationships, they experience a great deal of transition and mobility within their positions.

Despite their experiences, about which they have engaged in dialogues, communicated, and exchanged letters with me, several common themes and elements have emerged from their engagement. While some of the issues may seem peculiar, there is a degree of consensus on the themes I have culled from written and oral communications that continue to surface as part of their dialogue.

I should point out that the identification of the common themes and elements does not represent general cultural norms for these Latinas, but rather indicators of shared experiences within academia which have some commonalities. Such identification does not purport to depict these women's social histories, political formation, or demographic experiences as a single group, since this would be an inaccurate and unfair generalization. Yet, given the lack of formulated research on Latina academicians and the fact that they are so few, inquiry about the variety and quality of their experiences is essential. Therefore, I make a strong case for identifying individual and structural common experiences among Latina scholars as a means to portray their realities.

From these observations the analysis focuses on the phenomenon of underrepresentation from personal, research, and institutional perspectives. Within the general personal issues are sociocultural differences, mainstream workplace meanings, professionaliza-

tion processes, and more important, the impact of institutional structures on Latinas. Multiple factors such as research limitations, research biases, language domains, interpersonal attitudes, social obligations, and lack of mentoring, as well as intragroup expectations, are discussed as reasons why the experiences of Latinas have fared poorly in finding a voice in the academic and research literature on underrepresented communities. The differences between mainstream and Latina academicians, particularly in terms of social, cultural, gender, and political issues, are identified. From an institutional perspective, manifestations of covert racism and discrimination in terms of prevalent academic practices are identified, as well as the structural obstacles that impede the advancement of Latinas in their professionalization.

The world of Latina academicians and the social construction of their realities is presented in terms of the acknowledgment, recognition, and opposition they encounter, not only from mainstream academicians, but also from their Latina/Latino counterparts in various contexts. In addition, the impact that Latina feminist scholarship and research currently has in redefining Latinas' own paradigms is described for its realignment of women's studies to the more politically inclined analysis of Chicana/Puerto Rican feminism. Finally, I identify a series of public policy implications for higher education, including the need to incorporate ethnographic research studies with institutional analysis as well as the development of new paradigms, educational infrastructure, community outreach and participation, and assessment criteria.

The Underrepresentation of Latinos and Latinas in Higher Education

That Latinas are severely underrepresented in higher education, research, and teaching is an established fact.² According to Linda Johnsrud and Christine Des Jarlais, who cite the National Center for Education Statistics of 1991, "Of the 489,000 full-time instructional faculty in 1987, 89.5 percent were white, 3.2 percent were black, 2.3 percent were Hispanic, 4.2 percent were Asian, and 0.7 percent were American Indians."³ Of these, the percentage of all faculty members who are Latina professors is 0.2 percent, compared with 0.9 percent for Latino professors, 0.4 percent for Latina associate professors compared with 1.4 percent for Latinos, 0.6 percent for Latina assistant professors compared with 1.2 percent for Latinos, and 0.9 percent for Latina instructors and lecturers compared with 1.4 percent for Latinos.⁴

Underrepresented faculty numbers have kept pace neither with the growing population rates nor with the burgeoning numbers of underrepresented students entering higher education.⁵ They still comprise only 12 percent of the total faculty numbers, in contrast to their 20 percent population rate.⁶ Paradoxically, they are most underrepresented in private elite institutions and in two year-colleges, which enroll the highest concentration of underrepresented students whose access to higher education is assumed to be the lowest.⁷ Latinos tend to be heavily concentrated in ethnic studies such as Chicano or Puerto Rican studies programs, Spanish departments and bilingual education, or in isolated academic programs, where they are represented by single numbers.

While placements in tenure-track positions appear to implement the mandates and guidelines of affirmative action policies, they do little to make the presence of Latinos in higher education visible and to create "pipeline" opportunities for Latino students. In fact, says Michael Olivas:

Characterizing the problem of minority underenrollment at any level as a “pool problem” suggests a supply shortage, or at best, a failure to cast one’s line in the right fishing hole. . . . The data presented . . . make powerful claims that we produce too few qualified minority graduates to stock our faculties. The pipeline and ladder metaphors reinforce this view of the problem, suggesting that it is simply a delivery glitch, or that faculties would hire us if only they used better conveyances. After all, neither pipelines nor ladders produce anything of value; they only carry or convey products.⁸

Hisauro Garza and Elizabeth Cohen qualify that “academia seems not to hire qualified minority professors for whatever positions are available, but mainly to teach the necessary race relations or sociology of Chicanos or Blacks, etc.”⁹ Moreover, Latinos are still the least represented in the U.S. professoriat for all underrepresented groups and have the lowest participation rate in graduate education and in the pool of earned doctorates.¹⁰ Latino faculty are more commonly found in lower-regarded universities, state colleges, and two-year colleges than in prestigious institutions such as Harvard, Stanford, Berkeley, and Columbia, even though 95.9 percent of doctorates for Latinos are from such prestigious universities and “three out of four (71.4 percent) of Chicanos and Puerto Ricans who were untenured were located in high prestige universities” in Garza’s 1987 survey.¹¹

While the implications of underrepresentation of Latinos and Latinas at prestigious Ivy League institutions may not appear to be significant because “the Ivy League’s undergraduates make up less than one percent of the enrollment in the nation’s four-year colleges, that one percent is virtually the nation’s ruling class.”¹² With such concentration of power and decision making at Ivy Leagues, the presence of Latino faculty as role models in these institutions becomes compelling. Yet from the small numbers of tenure-track Latino faculty to be found within them, in relation to total faculty, student populations, and, particularly, Latino students, the commitment reflected by these institutions to diversify their faculty and comply with affirmative action goals is questionable.

Irene Middleman Thomas reports that there are currently 13 Latinos in the 600 tenure-track faculty and 571 Latino students out of 8,752 at Harvard University; at Cornell, there are 20 Latinos in the 1,581 total faculty and 730 Latino students out of 13,178 students; at Yale University, there are 20 Latino faculty out of 1,445 on tenure track with 292 Latino students in a student population of 5,217.¹³ At these prestigious institutions, Garza’s survey for 1987 indicated that 67.1 percent reported being the only Latino in the department, while 32.9 percent reported being the only Latino in the department at lower-prestige institutions.¹⁴

Between 1989 and 1990, Latinos earned 783 doctorates, only 2 percent of the total 37,980 awarded.¹⁵ The profile of Latino and African-American doctoral recipients indicates that they tend to be older than their Asian and white counterparts, take somewhat longer to complete their degrees, and more frequently go into teaching.¹⁶ Latinos tend to receive their doctorates primarily in education and secondarily in social sciences and the humanities. Yet studies of Latino doctorates indicate that they tend to “have the next to the lowest participation rate as college faculty.”¹⁷ In fact, according to Garza and Cohen, “only 13 percent of Latinos with doctorates in education obtain college faculty employment compared to 30 in math and natural sciences, 21 percent in psychology and social sciences, 29 percent in language, literature, arts and humanities, and 7 percent in engineering. Only one out of every eight Latino education doctorates actually go into college

or university teaching.”¹⁸ Thus, according to Garza and Cohen, doctorates in education are not likely to translate into university and teaching positions.¹⁹

The case for female faculty, particularly Latinas, is even more dismal. Over the past decade, the number of doctorates earned by women increased by 25 percent, but only 5 percent of these were earned by members of racial or ethnic minorities.²⁰ While the pool of doctorates (Ph.D.’s and Ed.D.’s) for underrepresented women has grown, there has not been much progress in terms of faculty appointments and tenure.²¹ Of the 4,069 full-time Latina faculty members in 1991, only 2.3 percent were tenured compared with 88.2 percent for white female faculty.²²

Such figures as are available speak of the paucity of the achievements of Latinos in response to the challenge posed by these numbers and the needs of the community.²³ These facts call for serious inquiry and explanation.

Categories of Latina Underrepresentation

While factors such as individual persistence, motivation, financial circumstances, and so forth, may explain given cases of obstructed achievement for Latinas, the phenomenon of underrepresentation calls for a deeper analysis of the problem. Broadly speaking, at least four categories of underrepresentation of Latinas in higher education have to be considered: (1) perceived sociocultural differences, (2) mainstream workplace meanings, (3) the professionalization of Latinas, and (4) institutional factors.

How Latinas perceive and interpret the situation in which they are placed when they embark on educational endeavors in American mainstream contexts is one of the most important determinants of their chances of success and prominence in their respective fields. For Latinas, entry into the world of academia is fraught with their perceived beliefs of the expectations and demands they will encounter in higher education. At the same time, there is also the institutional ethos they confront, which also reflects a set of beliefs regarding Latinas and their status vis-à-vis other ethnic groups.

For many Latinas, the vehicle for their entry and acceptance into higher education has been served by the existence of affirmative action programs that were put into practice in higher education during the 1970s. In fact, sex discrimination in federally financed employment was actively applied for the first time in higher education through the executive order.²⁴ Such programs have aimed at increasing opportunities for women to enter academia while ensuring equity in competition for faculty positions by developing goals that demonstrate the access, retention, and promotion of women and underrepresented groups. Such programs promised restitution for past discriminatory practices while maintaining a balance between the sexes. Specific groups such as Latinos, African-Americans, Asians, and Native Americans have been targeted as “protected groups” requiring preferential treatment.

However well intended these programs have been, affirmative action policies in their implementation of goals have been hampered by a series of complexities that range from identifying available women and underrepresented group members to institution-based, rather than department-based hiring goals. In some institutions, affirmative action policies have been translated to the use of quotas based on race and gender as remedies; thus, when Latinas gain entry or are hired in higher education, suspicion about the reasons for their being there are raised as a form of tokenism or as examples of reverse discrimination.

Nowhere has this reaction been more apparent than in the hiring of Latinas as faculty or administrators where the institution has manipulated their representation under the "two-fer or three-fer notions." That is, faculty or administrators are hired under the assumption that they are filling both an underrepresented and a female slot, particularly as a woman of color.²⁵ In this manner, the institution can consider that it has in fact fulfilled several quotas that meet the criteria of affirmative action policies.

Yet by more indicators — the prevailing hiring practices, career path promotions, and the number of available tenured academic slots for Latinas — such an assumption is not supported. According to Marian Chamberlain, "Neither information on the pool of eligibles nor data on faculty composition indicate disproportionate gains by minority women."²⁶ In point of fact, the research of Johnsrud and Des Jarlais points out that "women and [underrepresented] faculty tend to be promoted and tenured more slowly than white male faculty and are more likely to leave an institution before gaining tenure."²⁷

The study of Shirley Achor and Aida Morales of one hundred Chicanas who earned their doctorates despite overt and covert discrimination indicates that the completion of their degrees was in large part due to expected personal and institutional belief patterns held and not accepting the norms.²⁸ In this study, the reactions of Chicanas to discrimination were not based on intimidation but on resistance, challenge, and contestation of the negative messages for failure. As Achor and Morales express it: "Negative messages casting doubts on the abilities of persons of their ethnicity and gender to succeed served not as an impediment, but as an impetus to prove the message wrong."²⁹ Such resistance, termed "resistance with accommodation" by Achor and Morales, implies a rejection of the existing power relationships within the confines of the institutionally approved means to gain educational advancement.

Indeed, the impact of factors such as the cultural universe of Latinos — and of the role of gender — and of power relations is so important that it is surprising that it has received so little attention in the literature on the subject in academic settings.³⁰ Equally important is the meaning that mainstream society attaches to the work and presence of the Latino educator.³¹ This meaning — how mainstream authorities in education perceive the Latina's being and role, together with the expectations and demands that follow from this perception — powerfully affect the Latina's image of her role and purpose.

Often enough, the experiences of Latinas involve a conflict between the meaning that mainstream academic culture foists upon them and the world view — the social assumptions and obligations that they have inherited as part of their indigenous cultures and traditions. Their role then becomes, at best, that of mediator between two or more worlds of value and meaning. It is a role confounded by incompatible or divergent expectations. A sensitivity to the subjective conflicts that this engenders is therefore vital to a proper understanding of the reasons for underrepresentation.

To become professional, "having an assured competence in a particular field or occupation" is required.³² Such acquisition does not readily become available with the academic territory for Latinas.³³ A small but growing research literature indicates that underrepresented faculty members experience academia quite differently from their nonunderrepresented counterparts.³⁴ Furthermore, the rites of passage as experienced by Latinos, and in particular Latinas, is also uniquely different.³⁵

On the one hand, socialization into a professional academic role for Latinas requires, among other things, being guided into the role and responsibilities of academician within the institution, that is, of being a scholar and researcher who is supported in both work

and teaching by colleagues of the academy. It requires developing personal relationships through peer coaching and mentoring and building networks that will support one's work. It also requires developing the political knowledge of how institutions function and how senior faculty can be advocates for one's advancement.

On the other hand, at the individual level the advancement of the professional self means knowing how the mainstream career track can operate for oneself — the ways in which the rules and regulations can be accessed and understood and how one negotiates them while maintaining connections to one's own culture. Ofelia Miramontes describes such a process:

In higher education, we enter an environment that heightens the focus on the individual. The currency is personalized to the individual and his/her intellect. Writing, introspection and reflection are most important, and work focuses specifically on handling context-reduced abstractions. The academic requirements of reflection and mental activity seem antithetical to the community action model we learned in our early development. The distance between reflection and action is compounded by the awareness of the acute sociopolitical needs of the Hispanic community.³⁶

To these categories of factors — the Latina's reality and the reality as conceived by mainstream academics and the socialization of the personal and professional persona — must be added a fourth category: the institutional factors affecting access, retention, job security, and career advancement. Institutional realities of this kind are affected by, and in turn affect and influence, the meanings and perceptions that are projected upon Latinas and their careers in the field of education. Together they constitute the realm of experience in which such a woman finds herself placed for better or for worse.

Obstructions within Academic and Research Settings

Since Theresa Herrera Escobedo's article "Are Hispanic Women in Higher Education the Nonexistent Minority?" appeared in *Educational Researcher* in 1980, attempts at examining this significant yet neglected topic have spuriously appeared in academic journals, at educational and women's conferences, as part of women's studies programs, or as state-of-the-art reports.³⁷

Latinas have been represented in the research within the aggregate statistics of other "underrepresented" groups or as part of an inclusive category used to explain all Latino subgroups.³⁸ Such representation does justice neither to the uniqueness of the individual nor the shared experiences of Latinas within their own subgroup. More obscuring has been the identification of Latinas solely within the confines of affirmative action programs. When they are represented as quotas within an institution, their professional contributions beyond their ethnic identification may likely be obscured.

The research about Latinas in education is also not free of problems. Among the reasons cited for the dearth of usable research data on the experiences of Latinas, Adelaida Del Castillo, Jeanie Frederickson, Teresa McKenna, and Flora Ida Ortiz list the following: (1) Research on descriptions or analysis of the educational reality of Latinas in its complexity or how the educational experiences of Latinas and Latinos differ is limited from either a gender or general perspective. (2) Research for Latinos in education has been conceptualized from a "cultural deficiency model" ascribing negative expectations, attitudes, values, and behaviors to Latinos as a single group. Thus explanations of failure for Latinos are stereotypically defined as being endemic of personal or family structures.

(3) Research that represents Latinas and Latinos in general as a monolithic group from which findings are generalized to all ethnic subgroups or socioeconomic levels is inaccurate and invalid. (4) More important is the lack of appropriate conceptual models that direct and interpret research efforts on the educational experiences of Latinas.³⁹

To these research problems focusing on the disparity of women in academia is added the dilemma of focus identified by Johnsrud and Des Jarlais in terms of the structural analysis of the academy and what it must do to retain women, particularly underrepresented women, and individual or interpersonal roles, and what women, especially underrepresented women, must do to survive.⁴⁰ Again because the research on underrepresented faculty is so sparse, accurate conclusions cannot be made of Latinas as a whole on the one hand and, on the other, “the need to provide anonymity for respondents makes it very difficult to partition the data in meaningful ways (i.e., by ethnic or racial group, sex, rank, or discipline).”⁴¹

One of the principal reasons for the lopsided, indeed dogmatic, bias among researchers in the field of education favoring conventional social science as “science” is its grounding in Euro-centered and positivist paradigms. In the viewpoint resulting from this bias, the participant’s experience is treated as of no more than anecdotal value (and hence as a species of folklore) if it does not fall within the traditionally accepted Newtonian or Bayesian paradigms.⁴² A case in point is the following vignette:

At a conference on Minority Women’s Issues, a mainstream researcher comments during her presentation that the Latinas in the survey failed to fill in the portion of the questionnaire that had the word “race.” She remarks that these women obviously didn’t know what race they belonged to! To clarify issues, I point out that for Chicanas/ Mexican-Americans, the concept of race refers to “la raza” — which is an inclusive cultural and social notion expressing a sense of nationhood or peoplehood for all indigenous peoples of the Americas. Thus for these women, the biological definition of race may not be uppermost in their minds. Yet the researcher argues that they should know from living in the United States how to answer a questionnaire with such terms by now.⁴³

It is clear from this example that the implicit knowledge of the meaning of race by Chicanas and Mexican-Americans is viewed as being symbolically too abstract to be understood or even accepted in this context where mainstream women report on Latinas. Yet when Latinas attempt to report on their own analysis, the following may occur, as was the case for a Latina faculty member at an eastern university: “If I say something about the Latino family, I am viewed as being overly concerned with my Latino origins, but if my white middle-class colleague makes a generalization regarding machismo and Latino families, it is taken to be a fact.”⁴⁴

Within the research domain, such explanation does not carry the same explanatory power as that proposed by the mainstream researcher. More often, instances such as the one cited above are discounted as “subjective” and unscientific and, therefore, an unreliable means to knowledge and inference. Statements of experience, of one’s ethos or environment, are admitted to the status neither of theory nor of empirical finding. What is needed is nothing short of an epistemological shift — a shift, that is, in the very assumptions about what constitutes knowledge. In the absence of such a shift, even well-recognized and acclaimed contributions of Latina educators will be accorded only partial acceptance as “personal or literary accounts.”⁴⁵

A Latina in an academic and educational research setting is especially vulnerable to being ignored on this ground because her experience goes against the grain of received wisdom, and her voice is therefore new and tentative.⁴⁶ It is interesting, in this context, to find that the self-expressions of Latinas are made less of at academic forums and seminars, not only by men but also by other women, as random and unsystematic — in short, as “unscientific.”

One of the most common arenas where the self-expressions of Latinas are negated is the process of having proposals reviewed and accepted by peers for upcoming conferences. For most of the Latina researchers and faculty with whom I have maintained contact, the process has been a discouraging experience at best. These researchers have had to ensure that the message of their work was not only methodologically clear, but also “scientifically sound,” while suppressing findings that would be used to pigeonhole all Latinos.

Remarks collected from several of the Latinas in these observations who have submitted proposal abstracts follow. In the case of a senior Puerto Rican Latina faculty member, the comments were: “Potentially good, but vague. If accepted, we may want to request a written paper in advance for others in session to read. Also, if not received, cancel session.” In another case of a Puerto Rican junior faculty member who is a diversity trainer, the comments were: “Entirely appropriate topic for a meeting on ‘diversity,’ however the database is impressionistic, it may be a very valuable personal essay, but it does not appear to be a systematic study.” In yet another case, that of a Mexican-American junior faculty who has written a reflective essay derived from a survey, the comments were:

Reflections, observations, and histories of Latinas in the field of education may be engaging, but Div. X should present objective data on a topic of this sort. Good idea, but needs hard data more than reflections, observations and interviews. The topic is apt, but the qualitative literature may not be as objective as surveying colleges by objective questions.

Such comments hardly help the recipients know how to readdress their proposals so as to resubmit them in the future. When a proposal is finally accepted and is placed by the chair within an area to appear in the program, where the paper finally ends up is critical. For example, in several of these Latinas’ experiences, it was not uncommon to find their papers within panels that had little to do with the subject. For instance one of the Puerto Rican women who is a teacher educator commented: “I sent in a proposal on teachers’ knowledge, expecting it to be reviewed and placed within a panel dealing with teachers’ epistemologies, only to find myself defending my study against a panel of cognitive psychologists interested in analysis of items for testing.”⁴⁷

This same obstruction also prevails when one attempts to have her proposal fit “all white female conferences.” It is paradoxical to observe women finding fault with fellow-women for failing to be scientific or “rational,” when one remembers that these are precisely the epistemological labels with which male academics have tended to brand their female counterparts, denying them participation. Several of the Latinas from whom my observations are derived stated that some of the harshest critics of their work were other women, mostly those in authoritative positions, whether mainstream or other women of color.⁴⁸

When women of color had authority over other women of color and were easily perceived as being “a visible minority — darker skin color,” Latinas of lighter skin color found themselves being ignored and outranked for their contributions even though they shared the same nomenclature of “underrepresented.”⁴⁹

One Puerto Rican researcher who expected to develop a curriculum that identified aspects of Puerto Rican culture which affected early childhood development was told by her supervisor that “Latinos were out, because the emphasis was on African-American children for the reports. And as long as she directed the project, there would be no exploration of Latinos and their educational issues.” The Latina researcher resigned from her job after all her projects with a Latino focus were rejected by her supervisor, an African-American woman.

The experiential world of Latina academicians must be taken as the mainstay of any attempt to understand their situation. This experience entails factors intimate to one’s identity, such as language and interpersonal social relationships. Contradictory understandings of these factors in the milieus in question — mainstream academic, Latino, and underrepresented groups — lead to stresses and strains in the Latina academician seeking to cope with the system.

Issues of language are often understood literally, that is, in terms of Spanish versus English. But the problem extends to the deeper level of modes of thinking. In conventional academics, the modes of thought are patterned after a technical operations model. They involve a notion of “rationality” that excludes, or at least minimizes, passion and experiential insights. This bias is reflected in the use of academic jargon.

One of the reasons Latinas find it difficult to relate to academic language, which is highly stylized and artificial, is that their own modes of thinking and expression are adverse to the strict separation between cognition and passion, the personal and the impersonal, and the social and the unsocial. Even for mainstream faculty and researchers, the academic and the personal constitute two domains between which they regularly learn to mediate. For the Latino, this problem is compounded by the fact that Latino cultures do not foster such separation of domains in the first place.

Learning to write academically, therefore, involves more than learning the conventions of a specialized language; it involves a cultural shift, a shift to a new, distinctively different and, from the Latino’s point of view, a restrictive mode of experience. In essence, what the academic code demands is primarily writing that is divorced from passion and tends to be abstract and objective. This problem may partly explain the difficulties some Latino faculty may face in meeting the demands of academia for publications. Gloria Anzaldua speaks to this very issue: “How hard it is for us to think we can choose to become writers, much less feel and believe that we can. What have we to contribute, to give? Our own expectations condition us. Does not our class, our culture as well as the white man tell us writing is not for women such as us?”⁵⁰

Yet for most of the Latina academicians quoted here, using the strength of their storytelling as oral and written narratives is one of the most direct forms of their expression. A Honduran researcher/consultant expressed this sentiment succinctly: “When I write in Spanish I tell my story and give it breath. When I write in English I begin to sterilize my language by the shortness of the words and the directness of meaning.”⁵¹

Such narrative styles are not accepted as part of academic writing. The use of metaphors or personal examples may be viewed as abstract and simple; avoiding too much relation of the personal is taught early on through graduate training and writing for publications.

Similar experiences occur with language use, particularly in the delivery of formal lectures. The very mode of presentation requires principled judgments about one's audience, degree of engagement, and information overload. One of the most common expressions heard by these Latinas is "how articulate one is in presenting the topic under discussion." Such expression assumes both amazement at the appropriate use of English, given the fact that one's own first language is Spanish, but also that the presentation can be made in English even with a detected underlying accent. Such expressions tend to hide more than they reveal, and they are so commonly employed that many of my Latina colleagues have come to expect them.

Speaking, like writing, commands a certain presence of mind that structures the very act of speaking. To be direct and get right to the point are notable attributes to be mastered even by a novice educator. Yet the use of appropriate body language in conveying one's message is equally important. One of the Mexican women faculty felt frustrated upon reading a student's evaluation, which said: "This would be a worthwhile class, if you wouldn't use your hands. In focusing on your hands, you distract my train of thought." While the faculty member felt she could be on guard about her hand movements during a lecture, she had to admit that she used her hands naturally and unknowingly, actions that would be hard to change.

A similar cultural hiatus exists in relation to interpersonal social attitudes. Mainstream educators generally expect their students to take the initiative to approach them with problems, to speak up in class, and to be assertive. They also tend, in varying degrees, to adopt an informal, roughly egalitarian approach toward students when they permit or encourage them, for instance, to call them by their first names.⁵²

By contrast, within Latino cultures, professors are conceived by the older generations of Latinos as being akin to a parent. He or she is expected to be the person in authority, with an inherent right to redress or reprimand whenever necessary.⁵³ The response of graduate students to faculty tends by and large to be based on the social rights that accrue to such status. Thus roles are fixed for faculty as they are for students. This conception is likely to influence the relationship Latino graduate students form with diverse faculty at universities.

Based upon these cues, silence and showing respect may be as expected behaviors on the part of Latina graduate students as are deference and authority for the faculty member. Some Latinas, depending on their upbringing and family values, may be greatly disinclined to approach a faculty member directly and do so only after great hesitation and a sense of undertaking. As the Argentine faculty member commented:

I only learned to respond to my Latina students after I observed them approach me as a group. I noticed that when they had an institutional query or problem, they first talked to their parents, then to their classmates, and only then, if they were accompanied by several people, would they meet up with me. Thus I am no longer surprised to hear from other professors that their Latina students do not ritualistically meet them even though office hours are posted.⁵⁴

It is clear that Latinas, both graduate students and faculty, tend to rely on the social networks they are accustomed to. Thus the ritual of first relying on their social networks before having openly to confide their issues to an administrator, faculty member, or counselor may be both family and culture dependent. These cues are constantly liable to be misunderstood by the mainstream educator who has insufficient empathy and under-

standing for his and her students' cultural worlds. Reticence and silence, for instance, are frequently misunderstood as signs of lack of interest, or even of intelligence.⁵⁵

Lack of sympathy may also lead to a misreading of critical events in an adult's life. To take but one example, one of the Puerto Rican faculty members commented that in her committee work, "graduate students who demonstrated emotions, particularly on the personal statements of admission forms, appeared to be interpreted by other mainstream readers as projecting weaknesses, instability, and inability to cope with the stress of academia." Thus the committee's reaction was to favor the more traditional and direct expressions of interest, devoid of emotionalism and passion.

For the Latina professor tuning in to these aspects may in fact place such a faculty member at a disadvantage, particularly when seen in the light of other students. Some of my Latina associates commented that they had to be careful about not appearing to favor Latino students who had emotional issues so that they would be seen as objective and impartial. It is evident that greater attention to the meanings that these and other aspects of life and behavior contain would go a long way toward helping Latinas unfold their potential in educational institutions.

Among those characteristics which are distinctive of Latino culture(s) is a sense of active, ongoing obligation a Latino feels toward his or her family, group, neighborhood, barrio, community, and in some cases, country of origin. This *personalismo* or personal-relationship building carries with it a set of obligations and expectations. These obligations increase and multiply as the individual acquires certain skills — speaking English, conducting research, or negotiating grant funding, for example — and comes to occupy a position of status and eminence in a mainstream organization such as a university. The individual is scarcely detached, in the first place, from the family. Hence, conformity and compliance to meeting individual expectations can be readily called into action by other Latina students or colleagues. For this reason, the mainstream American, brought up as she or he is with a strong streak of individualism, would find it hard to understand the Latino's sense of obligation to relate his or her job to the demands and expectations of the community.

At the family level, professional Latinas feel duty bound to devote part of their lives to looking after not only their husbands, but parents, children, and extended family members too — even those who may be single parents. As a result, they make career decisions in close consultation with family members — something, incidentally, that non-Latino counselors are prone to devalue or misunderstand.⁵⁶ But this network of obligations and reference extends well beyond the family, embracing the young and the elderly of the community as a whole.

For most of the women in these observations, particularly those who live with their families or are close to them, the idea of counting on extended family members to achieve their educational goals stands out as a major reason contributing to their success. In their estimation, it is not the success of one individual, but the success of the group that counts. This contrasts sharply with the notion that one can achieve single-handedly in academia. Thus the zeal with which commitments are undertaken often exceeds the limitations of the task and places high demands on the performance of many.

The attainment of rank and position at an institution such as a major university is perceived by many Latinos as carrying an automatic obligation to society and hence to its members. The status holder is expected to serve as a role model for the youth in the

community. Her obligations are seen as part of the reciprocal *deberes* and *pagares* — “duties” and “trade-offs” — that one constantly contracts through the passage of life and personal relationships. The more needy segments in the community expect attention, help, and favors from the fortunate among them who have “made it” in the wider society and essentially represent them.⁵⁷ Within the academic community, these expectations may entail help beyond the required advisement and mentoring in seeking financial support, grants, or social reciprocities such as the exchange of child care for other services, translations, typing, and so on.

Such expectations entail expenditure of time and effort, of which there is little understanding or appreciation in a typical university, which directs attention away from the faculty’s research and academic demands. Thus, it is occasionally with some trepidation that Latina academicians take other Latinas under their wing, knowing what the risks and demands may be. The Latina academician may benefit the student directly, and may herself benefit from working cooperatively, but she may also find herself criticized by her colleagues for placing “community concerns, personal interests, and students’ needs ahead of her career.” (This notion was shared by all of the women in the study.)

Some of these Latinas find themselves caught within the demands of the larger institutional culture, the demands of their own cultural group, and the demands of students who look to them for guidance as role models. This within-group set of demands is not clearly understood from one Latina to another and may in fact create serious tensions, particularly when the demand seems inappropriate in the context of academic culture. For example, expecting to receive a recommendation simply because it is “owed” to one by reason of personal and social ties can create undue tension for the person recommending. Mixing personal demands with professional needs may lead to the development of entitlements that are socially expected to be “redeemable” when needed. It may be particularly hard to back away from such a request, especially during times of promotion and tenure review, when recommendations for a faculty’s dossier may be solicited without asking. By far the most frustrating situation expressed by many of these Latinas has been the number of times they have found themselves competing with one another for the available limited resources of a grant, research project, or even publications, or when they have been naive in failing to understand that they have been pitted against each other for a single tenured slot or administrative position.

Aside from these social obligations, Latinas also find themselves in situations where they have been hired as faculty to teach, conduct research, and advise students, yet have not themselves been mentored by others. According to Henry Trueba, there are specific issues about mentoring which merit attention: (1) the commitment by institutions of higher education to formalize a process for mentoring junior faculty; (2) the understanding of the nature of mentoring as a two-way process of interaction, as “assisted performance” and as “culturally congruent”; and (3) the reciprocal, collective commitment to mentoring via networks and other cooperative arrangements.⁵⁸

The mentoring experiences of most of the Latinas represented here can best be described by the adage “Be sure you have a white male mentoring you.” Most have learned to gain entry, direction, and positioning within the academic structure by being mentored primarily by “significant white males,” and secondarily by “important and visible Latino males” and “other women,” particularly mainstream women in power, who have gained a foothold in an institution. Two-thirds of the women surveyed have been mentored by faculty or administrators outside their institutions; the remaining third

have risen to their faculty or administrative positions after being at their institutions for more than ten years and developing internal networks of support. Because the total network of Latinos in education nationwide is small, it is likely that Latinas become targeted early on in their professional development. Two of the women were in fact “targets of opportunity” for faculty positions at state universities, yet neither moved, since both had ongoing research in communities.

Seldom have Latinas in power been at the forefront of their mentoring. First, because being mentored by other Latinas is a rarity, except where sufficient numbers of Latinos and established networks of Latino scholars can be identified. Second, because many Latina mentors themselves are struggling to survive within the institutional framework and find themselves overwhelmed, unable to take anyone under their tutelage. The mentoring they do provide may be sporadic and limited, relegated mostly to advising through coursework. Third, where mainstream faculty mentor Latinas, their interest may be peripheral to the research interests of the Latina, who is invested in her community; therefore, the contribution of time and energy become scarce commodities, generating separate domains of interest. It is not uncommon for a Latina researcher/faculty to be attached to a project that is of interest to mainstream faculty simply because, she says, “as a Latina I add the ethnic color or viability for the project to have a Latino component.”⁵⁹

Mentoring by Latinas or other Latinos has not been part of the conventional experience for Latina academicians even though within the cultural communities of Latinos, particularly Chicanos or Mexicanos, *comadres* and *compadres* (godmothers and godfathers) are commonly one’s first mentors. Their track record, compared with that of mainstream women, depicts a more recently learned style of being academically socialized.⁶⁰ The younger generations of Latina researchers are able to parlay these acquired social and academic skills into their professional portfolios, but for the older generation of Latina scholars who have made it on their own, the notion of mentoring, while commonly known within Latino cultures, appears to be “new” on the academic horizon.

These examples of research, language, social obligations, and within-group demands are a few of the more apparent reasons why the voices of Latinas have not fared well within academic and research settings. However, they alone do not explain the nature of underrepresentation. To understand how such underrepresentation is played out, we need to turn to an analysis of the structure of academe and identify the institutional roles and responses Latinas encounter and the ways that gender differences work for and against them.

Analysis of Common Themes and Elements

The difficulties facing the Latina educator do not arise solely from the incompatibility between the values and cultural assumptions of the two worlds in which she moves. They are also a direct consequence of the terms in which her being and role are defined by the institution that hires her. Among the common themes and elements that have emerged for most of these Latinas in their academic and institutional experiences are the following:

Quién es Quién: Role Definition

In today’s world, such a professional is hired to be a representative of Latinos as a “minority” category. In this classification, Puerto Ricans, Mexican-Americans, Central and South Americans, and Cubans are all described as a homogenous, undifferentiated

class.⁶¹ Such pigeonholing imposes simultaneous visibility and invisibility on its members. Visibility is evident in the department's portrayal of the Latino or Latina faculty as its "ethnic" professor, serving on committees, doctoral admissions, university councils, and so forth. Invisibility is apparent when one's role is ignored, diminished, or undermined. The fragile balance between being a faculty member and being perceived as a representative of an ethnic group places one in a state of limbo. For example, when one of the Mexican Latinas was asked to submit a biographical statement on her teaching and research interests for the university catalog, she readily complied, submitted the required information, then discovered, to her chagrin, that she had been left out of the catalog altogether. After inquiring why this had happened (it proved to be clerical error), she was told by the associate dean "not to raise any ruckus by making demands that material be included after the catalog had already gone to the printers, but to simply hand out [my] bio statements during student orientation." Although the same faculty member was praised as the first full-time Latina professor at this prestigious university, she was ignored by her omission from a key source of information for students and other faculty.

In other instances, the usage of names becomes part of the visibility/invisibility dichotomy. The use of one's Latino name carries greater currency within an institution than an Anglicized version or, for several of the women, a hyphenated name. Therefore, the custom of Latinas' using double names (father's and mother's last names), or their married and paternal names, may present not only pronunciation problems for the university community, but even worse when the name is not commonly recognized as "Latino," it may lack authenticity.

La Unica: One-of-a-Kind Representation

Unlike African-American female academicians who over the years have built strong platforms of power and academic credibility across U.S. institutions of higher learning, Latinas have not experienced the same access or support for gaining a foothold in academia. This is partly due to the fact that outside the geographic areas where Latinos are concentrated and numerically visible, having a Latina faculty member in an institution where she is the only "one of a kind representative for Latinos" does not in itself obligate the institution to look at its commitment beyond meeting affirmative action criteria. Thus, the visibility is the recognition enshrined in, among other things, affirmative action programs and "tokenism."

Que Sí, Que No: Fit or Lack of Fit

The single Latina in a department or college may easily fall prey to a "damned if you do and damned if you don't" dilemma. On the one hand, when it is necessary, the Latina academician is considered to be the mentor of all Latinos in the program, is assigned all the Latinos or Spanish-surname students as her advisees, is asked to do any translations into Spanish that may be needed on their behalf, is expected to advocate for their interests since she best represents their needs, and is most appropriate to guide them through their doctoral studies. On the other hand, the same faculty member, viewed as a professional in her given field, is expected to fulfill the demands of committee meetings, teaching, conducting research, and publishing while sustaining Latinos students in their scholarly endeavors. If she does not engage in such demands, she may be viewed as failing to contribute to their advancement; and if does, she may be viewed as overex-

tending herself because she has to prove herself to her colleagues. As Herrera Escobedo cogently expresses it, "The specific identity of the professional qua professional is suppressed or ignored."⁶²

This same dilemma arises when the Latina is characterized as the "multicultural or Latino" expert because of her background, experience, or teaching in these areas. Yet at the same time, that expertise can be readily developed by mainstream faculty simply through readings on a subject or the creation of a course. As one of the Puerto Rican women said, "You're either the multicultural expert or you are not. But you can't be one today and not tomorrow."

This ambiguity is particularly evident when other Latinas, who are new arrivals in the United States, become identified as the "multicultural experts overnight," based solely on their use of Spanish and Latino backgrounds. In many of these cases, the issues of urban education and racial or ethnic tensions are foreign to them, yet they are asked to provide cultural training workshops without knowledge of cultural diversity in the schools or experiences of racism and discrimination. The identity of the Latina professional is thus fraught with uncertainties and perplexities. The question is, as one of the Latinas compellingly asked, "Are we hired as minorities to only teach minorities? Or are we hired as professionals?"⁶³

La Latina Más Latina: Ethnic Overrepresentation

One's feeling of belonging to an institution is always made difficult by the realization that ethnic representation is the basis on which one attends committee meetings, participates in admissions procedures, provides orientation to "underrepresented" students, and presents multicultural or cultural analyses to alumnae and board members on special occasions. The rituals demanded by being the "Latino on board" make it difficult to be understood on one's own merits.

Acción Afirmativa, Acción Negativa: Affirmative Action/Negative Action

The Latina professionals' sense of underrecognition is aggravated by the circumstances of affirmative action, especially with regard to access, retention, and promotion policies. While several Latina researchers would argue that affirmative action policy initiatives at their institutions provided access by opening doors, they would also confirm that "just as the doors were opened, they were immediately shut behind."

Selection procedures, to start with, are centered almost exclusively on numerical attainment or quotas. Consider the fact that in many academic committee meetings, Latinas are invited in order to assure fair representation of all ethnic groups, yet the visibility of Latinas as one of a kind carries little weight beyond the numerical or visibility set of values. A case in point is a dean's report to the president of the university at an institution where one of the Latina professionals teaches. The dean informed the president that the college had made substantive strides in its hiring of "five blacks and one Latino" as minority faculty. The question this raises is, Would the same have been true for the hiring of "ten whites"?

This external, quantitative aim is pursued to the exclusion of any thoughts about the professional development or fulfillment of the candidate once she has been hired. Only five of the fifteen Latinas were involved in any orientation meeting or discussion by a chairperson, describing what they should and could expect for their future at their respective institutions.

Once one is confirmed as faculty, there are no guarantees set into motion to provide retention or promotion, particularly in nontenure situations. The mentoring and teaching of implicit rules for professional advancement — what committees to belong to, when to request promotion, how to situate oneself on the career ladder, what projects to engage in, what research will advance one's future — are not readily shared or fostered, either by peers competing for the same promotion or by senior tenured faculty who are not direct mentors. Left alone, the Latina faculty member needs to politicize herself about the culture of academe in order to define her next steps.

This learning by default may not provide the professional advancement that Latinas hope to achieve. So the rules for survival become ends in themselves, overtaking the faculty member's energies away from gaining the rewards of the culture. In cases where promotion is denied and retention is unlikely, Latinas are faced with few redeeming possibilities. They either seek other employment within the institution, go into administration, or leave altogether. The few that challenge the culture under discrimination suits engage in long-term struggles on their own. Because affirmative action policies within such institutions are defined in terms of programs, not the individual, discrimination or racism charges are simply ignored. If general quotas are met, the individual case does not matter. One Latina painfully learned this lesson as a former Ivy League faculty member. Although her chair prompted her to go for a promotion based on the review of her work, she was overturned by a committee composed of faculty who were newly hired, had opposing views on the content this faculty taught, and did not share the Latina's research interests. When the Latina confronted the chair about why she had been "set up," the chair replied that in academia "nothing ventured was nothing gained." This response prompted the faculty member to reapply for the promotion a year later before a committee chaired by a member of her department and faculty representatives who were aware of her research. She was promoted to associate professor, but her non-tenure contract was not renewed. Thus, the learning that goes on is by happenstance, not because it is promoted. A Puerto Rican faculty commented: "We learn not because we are given the time of day, but because we learn *a contazos* [by hard blows]."

In at least two cases, discriminatory practices in the promotion of Latinas were clearly identified. Realizing that there was no viable mechanism or support within the institutional framework which would deal with specific cases, one faculty member sought legal recourse. Unable to prove discriminatory cause, she was simply "silenced" by not having her contract renewed. The other Latina was deflected from filing a discrimination suit by being given strong recommendations to go elsewhere.

La Puerta Giratoria: The Revolving Door Syndrome

Another well-known practice for non-tenure-track faculty is rotation of their contracts until a limited number of years is reached — known as the revolving door syndrome. While their mainstream counterparts, particularly at the Ivy Leagues, would "do anything to stay at the school," the year-to-year rotation has caused some of these Latinas to decide to take other, nonacademic positions which, while not appealing, at minimum provide more than lateral moves within the hierarchical academic structure. Others have dealt with the revolving door by taking on joint appointments in two areas or departments so that they can at least be assured of an additional year.

Tenure, the pinnacle of one's defined status and position within academia, is not seen as the most likely avenue of promotion or retention by several of these Latinas. In fact,

most would argue that the ante for being hired, promoted, and tenured has been raised in the last thirty years. During the 1960s and 1970s, the commonplace explanation was that there weren't any qualified (minority) faculty or candidates for the available positions. Today, that same explanation, particularly at some prestigious institutions, has greater qualifiers. It is not surprising to hear it said that "there are no world-class [minorities] to be tenured at our institution." Knowing this, several Latinas in my study have decided that getting close to the centers of power through administrative posts may present better alternatives than their faculty positions. Two have left academic tenure-track positions to become administrators within the same institutions or elsewhere.

Such experiences force Latinas to see their academic life as short-lived, with periodically renewed contracts for a finite period of time. Being deprived of the opportunity to view one's career as a linear, progressive, and purposive path undermines one's identity as a professional. As a result, one's sense of being a "token" employee, representing a whole diffuse race or class, is enhanced, causing resentment and a sense of nonfulfillment and, above all, isolation, which manifests itself in subtle ways. It is not the isolation of being alone, but the isolation of being invisible, except when it comes to dealing with "ethnic or underrepresented issues." It is no wonder that many, discouraged by such a likelihood, leave academia.

Institutional Racism and Discrimination

Underlying the sense of isolation and mistrust is also the sense of not belonging in academia. Reyes and Halcón have fully explored the basis of this feeling for Latino, and more specifically Chicano, faculty in "Racism in Academia: The Old Wolf Revisited."⁶⁴ Using examples of covert racism (elusive and implicit practices), Reyes and Halcón highlight how they serve to maintain the current status of Chicanos in academia and their small numbers. For the Latinas represented here, several of these practices have already been discussed, such as tokenism, being in positions that have been set aside for a limited number of scholars in either nonacademic or soft-money programs and do not legitimate Latinos as serious scholars, and the one-minority-per-pot syndrome, whereby there is room for only one minority faculty member per department to "represent" all Latinos at different committee and academic meetings, and "the brown-on-brown research taboo," where Latinos attempting to conduct research on their own communities are devalued, namely, considered self-serving, or minor in comparison with other scholars.⁶⁵

Additional examples are cited. For instance, the typecasting syndrome, in which Latinos "can and should . . . only occupy minority-related positions" becomes a means to guarantee that Latinos are "ghettoized," serving only underrepresented groups without being seen outside their affixed roles, and the "hairsplitting concept," which refers to the use of subjective or arbitrary reasons for not hiring or promoting underrepresented faculty even though they meet all the required criteria of academe.⁶⁶

Chicanos respond to such racism, say Reyes and Halcón, by giving in — simply accepting the norm as a given and assimilating at all costs; by giving up — experiencing burnout as a consequence of their struggle for righting injustices; by moving on — keeping the commitment to their communities alive while becoming realists and learning to pick their fights; or by fighting back — through perseverance or sacrifice of their academic careers.⁶⁷

Latinos at large tend to share some of these same responses with some variations, but for Latinas, the pressure to prove themselves to their colleagues takes on additional dimensions, including women's caring role. For example, it is not uncommon for Latinas to overcompensate for their assumed academic scholarliness through extended committee and community work, by taking on tasks that others refuse, or by overextending themselves through community research and social functions. Latinas frequently turn to their Latino colleagues for support, and while they may expect reciprocity, even there they may encounter obstruction to their achievement. The persistence of such obstruction is based on the relative distance of Latinas on the academic ladder.

Intergroup and Intragroup Obstruction

The relation of Latinas to the social expectations and socialization of academe merits attention. Because a Latina is farther removed from the academic old-boy network than her Latino or female counterparts, she has to overcome more obstacles to garner the support of several constituencies for academic advancement. Within the old-boy network, a common role undertaken by several of the Latinas has been in educating their white male counterparts about Latino cultures. While such teaching is considered part of the general learning about diversity and is positively promoted, it may wear thin for the Latina, particularly if the process is unidimensional and her mainstream counterpart evinces a passive response. There comes a time, says a Puerto Rican Latina, "when you stop teaching and expect some understanding in return. I don't have the time to always be teaching; some of the real learning comes from one's willingness to be vulnerable."⁶⁸

Likewise, when the relationship between the Latina and the mainstream male is differentiated by rank or status, knowing when there is genuine respect for one's ideas, without condescension, is critical. Hence the best matches between white male faculty and Latinas are created when mentoring and supportive undertakings such as presentations at conferences, conducting research, and collaborative publishing take place. During conferences and forums, showing that there are commonalities between the perspectives of white males and Latinas lends legitimacy to the research being presented. Moreover, mentoring of Latinas by white males helps in establishing the "right" set of networks.

In terms of the "old-girl" network, several of the experiences shared by the Latinas indicate that being female does not necessarily guarantee the sympathy of mainstream women toward them nor does it offer entry into mainstream academic domains. In fact, the role most commonly experienced by Latinas is that of informant about Latino cultures for these female researchers. One Chicana echoed, "I was always singled out when we needed to present research about underserved communities or make statements about the Latino population; otherwise, my research was ignored."⁶⁹

In other cases, the belief that prevails is that a Latina researcher or faculty member has to become acculturated or assimilated into the culture of mainstream academia by mainstream women, an issue that apparently is still far from being realized by mainstream feminists. Indeed, one of the difficult issues for some of the Latinas has been their observation of how some white female academicians attempt to appease white males by being particularly "hardworking, overzealous about their teaching, and overly committed," the so-called Stepford wives syndrome.⁷⁰ In these situations, the rewards for hard work and productivity may result in support for promotion and tenure, but the

price for conformity within the hierarchy of academia may be reminiscent of patriarchal domination and subordination, an experience Latinas do not necessarily wish to confront.

When collegiality between a Latina and an old-girl academician is achieved, their interests for collaboration most likely arise from deep mutual respect and the shared experiences of academic oppression. The sisterhood of women may have greater impact and power than single issues or conflicts. Thus women helping other women becomes one way in which the rites of passage are learned and transferred between mainstream and Latina academicians. Such rites require that Latinas have, using Bourdieu's terminology, tradable "cultural capital," namely, a set of beliefs, values, and shared vision that can be used as currency within academia. By employing the required cultural capital to fit the demands of mainstream academia, Latinas can also incorporate the socio-cultural and indigenous strategies they use to sustain themselves within their own cultural group for their mainstay. In academe, this means understanding how not only the old-boy and old-girl networks operate but, more important, how the "brown boy" network — the euphemism of several of the Latinas — functions to their advantage or obstruction.

Among the Latinas represented here, the consensus was that even when Latinas are able to overcome some of the social and academic institutional obstacles, they still have to face the barrier that their Latino male counterparts create. How that obstruction occurs is described by these women for single cases. Yet the consensus is that because few tenure-track positions in education are available, and because greater numbers of Latinos within the faculty pool are attempting to move into such slots, the competition for limited positions and resources is exacerbated by the greater numbers of Latinas participating in education. Another issue is the number of director's research positions available to Latinas. Traditionally, Latinos have chaired Chicano studies programs, and because the power in research dollars translates into institutional clout, Latinas are still vying for entry into such positions. In at least two reported cases, Latinas were overpowered and closed out from department decision making by Latinos in powerful research positions.

Once Latinas have gained entry into faculty positions, the question focuses on what they can expect from their Latino counterparts, given the variations of their own experiences in academia and requests for their support. Several Latinas stated that they had expected to gain the collegueship and promotion of their work by their own Latinos, much like the implicit meaning of the *dicho* (saying), "*Para que la cuña apriete, tiene que ser del mismo palo*" (For the cog to fit, it must be made from the same wood). However, in at least one-third of these cases, Latinas encountered avoidance from their colleagues, for example, distancing responses, resistance, or confrontational reactions to their requests for support. They found themselves being critiqued against the same criteria that mainstream academics demanded of them — scholarly research and sufficient referred publications. For most of the other Latinas, their professional experiences with Latinos were based on established personal relationships and mentoring opportunities. Having a *padrino* (godfather) was found to be quite helpful by many, particularly if the Latino had mastered the requirements of academia and could teach the Latina how to use the system.

There may be a shared set of rules, behaviors, and expectations Latino women and men adhere to as part of the cultural domains of each community and cultural subgroup, but within the academic culture of higher education, such norms may be challenged, and shifts in the implicit ways of conducting one's social affairs may give way to other evi-

dent institutional pressures and personal gains. Because Latinos have gained entry into academia in greater numbers does not mean that they work within the constructs of a Latino consciousness in academia. Whether the reasons for obstruction lie in what feminists consider the inherent patriarchy of academia — impermeable to change — or whether they have more to do with competition for limited resources, or even gender expectations between Latinos and Latinas, what is clear is that there is no uniform or underlying basis on which Latina academicians can assume that they can count on the support of Latinos.

How Latinas actually fare when there are Latino academic counterparts within departments is an important question to be raised. In fact, the need to analyze race/ethnic and class domination, which traditionally has been the thrust of the Chicano movement and Chicano studies programs, must incorporate, as Beatriz Pesquera and Adela de la Torre emphasize, a gender critique.⁷¹

The interconnections of culture and power, as well as visibility/invisibility of Latinas, along with issues of race, class, and gender within and between Latino cultural domains, are some of the significant arenas in which Latina feminist discourse, scholarship, and research have emerged. Gaining an understanding of the relational complexities for both Latinos and Latinas in academia is imperative. To understand this challenge, we need to situate Chicana/Mexicana scholarship and feminism within the discussion of mainstream feminism.

Latina versus Mainstream Feminism

While Latinas have for decades contributed to the development of ethnic studies, only recently have they “carved an institutional niche in academe.”⁷² The cultural knowledge and grounding of Latinas has in fact taken place through women’s studies groups, community programs, Latino U.S.-based literature, and the novels, biographies, and critiques written by Latin American women who have a following in the United States.⁷³ As Barbara Smith and Beverly Smith contend, “In academic and cultural circles, Third World women have become the subject matter of many literary and artistic endeavors by white women, and yet we are refused access to the pen, the publishing house, the galleries, and the classroom.”⁷⁴

Women’s studies and women’s community programs have been among the avenues where expression of Latina academic endeavors have found a voice, where mainstream feminists embrace the experiences of “women of color” as their own.⁷⁵ This accommodation is aptly explained by Judith Moschkovich:

When Anglo-American women speak of developing a new feminist or women’s culture, they are still working and thinking within an Anglo-American cultural framework. This new culture would still be just as racist and ethno-centric as patriarchal American culture. I have often confronted the attitude that anything that is “different” is male. Therefore if I hold on to my Latin culture I am holding on to hateful patriarchal constructs. Meanwhile, the Anglo woman who deals with the world in her Anglo way, with her Anglo culture is being “perfectly feminist.”⁷⁶

Part of what is needed is not having to explain and defend each other’s cultures, since each culture encompasses individual, social, moral, and political concerns of cultures undergoing change. Rather, asserts Moschkovich:

Learning about other cultures must be a sharing experience. An experience where American women learn on their own without wanting to be spoonfed by Latinas, but don't become experts after one book, one conversation or one stereotype. It is a delicate balance which can only be achieved with caring and respect for each other.⁷⁷

The distinction between Latinas' and Anglo women's feminist ideologies is uniquely different, by historical context, development, and experience. According to Lynn Stoner, Latin American feminists distinguish themselves from North American feminists, whom they consider to be antimale and antifamily. They do not realize that nineteenth-century North American women upheld similar values for the home and family and that the values of generations of American women in the 1940s and 1950s were also the same.⁷⁸ Nonetheless, says Stoner, Latin American feminists have been influenced by North American feminists: "Latin women were loath even to apply the term feminist to themselves because it had originated in the Anglo cultures and did not belong to their own lexicon."⁷⁹ Yet Latin women's reactions took the form of a sense of moderation in rejecting free love and the hatred of patriarchy expressed by North American feminists.

Today the resulting accommodation for many Latina feminists is the idea that one can simultaneously be feminist and feminine, critical and an advocate, objective and subjective, and community-based and social change oriented. Beyond calling into question the social and ideological apparatus that sustains racial and gender inequality and advances oppression, Latina feminists look to their communities for their strength and positive cultural production. Imbalances within the family, as well as women's political, social, and economic positions, are being explored and exposed.

Within the academic domain, these shifts in paradigms are being translated by Latinas into the ability to carry their culture on their sleeve, while knowing when to use power in brokering outcomes. For example, at a presentation by a Latina administrator who is one of the few deans at an Ivy League, her message on surviving the system to the women of the group was, "Take off the red lipstick and the dangling earrings if you are wearing and expecting to use your corporate suit to the fullest. Know what is expected of you and how to best deliver."

In this vein, Latina feminists across the United States are providing critiques of not only the way the society is structured hierarchically, but also how privilege and power are linked to male domination and to institutional and current academic cultures. Chicana/Mexicana scholarship and research is about challenging "analytical frameworks that dichotomize the multiple source of Chicana oppression; at the same time, it posits alternative frameworks grounded in the Chicana experience."⁸⁰

To that end, several projects and programs have emerged, for instance, the Cultural Studies Task Force at the Center for Puerto Rican Studies at Hunter College, the Chicana/Latina Research Project at the University of California at Davis, Women's Research Group Intercambio, City University of New York and the State University of New York systems, and the University of Puerto Rico, the National Puerto Rican Studies Association, and the Puertorriqueña/Chicana Comparative Research Project at the University of California at Santa Barbara sponsored by the Inter-University Program for Latino Research. The discussions at these centers focus on definitions of feminism, democratizing education, new research paradigms and methodologies, and interpreta-

tions of Latina and Latino history.⁸¹ At the same time, concrete topics such as issues of immigration, civil rights, racism, poverty, economy, health, education, recruitment and retention of students and faculty, cultural studies, gender, sexuality issues, adolescent and family issues, reproductive rights, welfare, and discrimination are being presented.⁸²

What clearly differentiates the research emphasis of Latina feminists from mainstream feminists is their challenge of traditional disciplines, Chicano studies and feminist theory, and the grounding of their thinking and curriculum in the community. According to Gloria Romero, "The work of Latinas must be at the disposal of and must benefit the community. If not, it can be progressive in challenging sexism, but ineffective in challenging the problems that beset the entire Latino community."⁸³

Policy Implications

The emphasis on women's issues and education have prompted the publication of several key reports on women in academe, including Latinas. Rather than repeating the recommendations these reports have made, which are directed at general issues, administrators, institutional data collection, curriculum, faculty, students, professional associations, organizations, and department chairs, search, promotion and tenure committees, meetings, special groups of women, graduate students, professional development programs, and individual men on campus, the policy implications I wish to reiterate and emphasize are derived from the Latinas' observations of their experiences and the literature reviewed.⁸⁴ While these are limited by their degree of generalizability, they are nonetheless reflective of shared common themes and elements, even for the small number of Latinas. Hence their value is in identifying areas where serious research, program development, and paradigm shifts might be considered, given an understanding of Latinas' social, professional, and cultural experiences. These implications follow.

Expand the Research on Latinas in Academia

Our knowledge about the experiences of Latinas in education is still quite new. We need to conduct research and document their experiences from junior high, high school, undergraduate, and graduate school to their professional careers. Such research must be systematically driven by quantitative data that are not misleading, as Olivas points out in using the "percentage increase approach" and "inter-ethnic group comparisons," which do not justify any characterizations because of size and lack of reliability.⁸⁵ In fact, imprecision about the data sample in disaggregation has led to implications about Latinos from samples that may be drawn only from Puerto Ricans or Mexicans.⁸⁶ Thus, Olivas strongly suggests having the research perspective of Latinos as an understanding of the research problem. In addition, the use of qualitative and ethnographic studies that yield intragroup analysis and comparative cultural group findings can be enormously useful in grounding the experiences of Latinas across multisites.⁸⁷ This requires that we expand within the research focus to include the experiences of black and Asian Latinas as well as immigrant, migrant, and U.S.- and non-U.S.-born Latinas. We also need to analyze the educational achievement and advancement of Latinas intergenerationally to identify potent influences such as assimilation and the two-tiered educational process that Jorge Chapa has described for first-, second-, and third-generation Mexican-Americans.⁸⁸

Integrate Research

As previously noted, it is not sufficient to focus research solely on the individual factors affecting Latinas' advancement in academia. We also have to understand the conditions under which they become professional, and that requires analyzing the contexts in which Latinas become educators as well as their own educational training and delivery. This means creating opportunities through research institutes for Latinas to focus on their own dilemmas as objects of study. It also implies that the conditions which constrain as well as engage Latinas in their education need to be identified and analyzed through longitudinal studies. In short, the focus of Latino institutes and Latina feminist research centers has to integrate the individual, interpersonal, instructional, and structural analysis of Latinas and document the constraints and advancements that institutions of higher learning provide. Such studies and their findings may call into question whether the basic hierarchical ladder to achievement in academia supports Latinas as well as other women and whether a reconceptualization of the field and restructuring strategies for academia might not be in order.

Develop Institutional Infrastructure

Clearly, the experiences shared herein profess the lack of infrastructure that accommodates the educational experiences of Latinas. To move ahead in their academic career tracks, Latinas must have in place an infrastructure that more than tolerates their presence. It requires a radical shift in the rationality currently prevailing in institutions of higher learning from their hierarchical, albeit patriarchal, stance to a more egalitarian and collaborative model of educational undertaking, because over the next twenty years, institutions of higher learning will be replacing retired faculty. Estimates are that approximately 500,000 faculty will be needed across the United States to offset retirements; then the proactive thinking which develops a readily restructured infrastructure to accept Latino faculty needs to be in place.⁸⁹ The current wave of temporary positions for women and Latinas has to give way to full-time positions; promotion and tenure will have to move at a faster and more equitable pace; and universities will have to groom the necessary critical mass of Latina scholars. This will require experimentation of several models which, unlike the pipeline theory, do not assume that a linear process is in place for the ascendancy of Latinas. In fact, what seems more appropriate is to consider how the lives of Latina scholars might be enhanced if new structures can be created. These structures need to consider how opportunities for mentoring, sabbaticals, and networking, as well as provisions for child care, can be creatively constructed.

Assess the Curriculum

Concentrated efforts need to be made about gathering, monitoring, and following the small yet growing numbers of Latinas in higher education by assessing under what set of circumstances they respond to academic teaching and research opportunities. This is to suggest that infusing curriculum with Latino representation or creating Latino studies programs in a vacuum will not be sufficient to change the ethos of mainstream academic culture. Instead, a variety of processes need to be developed to target individual, instructional, and institutional levels of program delivery. Traditionally, Latinas have been made to fit the academic system. Instead, what is being advocated is a combination of efforts on the part of universities, communities, and incoming Latina academicians to guarantee their place in teaching and research. Therefore, programs need to

include not only mentoring, peer coaching, writing, and language development, along with biliteracy and bilinguality as core integrated skills, but ongoing practicums whereby Latinas can test their own educational ideas and core coursework that include Latino content and Latino community input. Such programs need not be directed solely at Latinos, but should integrate mainstream students and faculty as well. Coteaching by Latino community leaders who help university faculty and students identify concrete issues worthy of research needs to be promoted so that the community's interests are represented. The intent is to develop a philosophical core within the curriculum and instructional programs which opens up dialogue with and about Latinas in education. In this manner, setting up an infrastructure, with coherent instructional programs directed at developing the professionalization of Latinas, while engendering universitywide policies, will be critical demarcations of successful practices.

Develop Community Outreach

The educational experiences of Latinas as graduate students and faculty need not occur in a vacuum. Instead, using the strengths of the communities themselves, a series of practicum experiences within the community can be made part of the Latinas' professional development. Such experiences can be accredited as part of the career ladder experiences for scholarly work, especially if a program or model is developed and implemented. This will undoubtedly call into question issues about teaching and research and the status granted to research over teaching. It will be necessary to break down such a dichotomy, given the thrust of collaborative research and community interventions currently under way. Thus, a reassessment of the value of teaching in guiding research and the value of research in informing teaching needs to be seriously studied, particularly as it pertains to Latinas and their educational commitments.

Such policy implications will inevitably require identifying Latinas at an early stage of their career development, setting mentoring programs in place from the middle school level on, developing peer coaching and networking strategies, creating leadership institutes directed at dealing with concrete on-the-job analysis of academic obstructions, and more important, collecting the oral histories, ethnographies of Latinas and their communities through case studies, surveys, journalistic descriptions, literary projects, and reflective analysis.

Today, the role of Latina feminist scholarship and research in directing attention to the advancement of Latinas in academia through collaborative, group efforts that emphasize working from within are necessary strategies. Programs such as the National Hispana Leadership Institute, which since 1989 has trained close to one hundred and fifty women in economic, educational, and political leadership, serve to create a cadre of Latina change agents who can serve not only the Latino but larger communities. The alliance of private and public interests in education alone can serve to exert pressure for change in academic settings.⁹⁰ The University of California faculty, for example, are currently engaged in using pressure to demand academic courses and teaching departments that represent the experience and contributions of Latinos, other people of color, and women.⁹¹

In summary, the reasons for underrepresentation of Latina professionals in the educational arena are manifold. These will remain misunderstood as long as explanations are proffered either in terms of individual variables or in indiscriminate racial or class terms. They require, above all, sensitivity to the cultural values, the world of meanings,

norms, and expectations that the Latina professional inhabits. The lack of congruence, in some cases, between mainstream American norms and privilege and those of Latinas is a powerful factor causing them conflicts of time, energy, and direction. As such, the incongruence has to be understood in all its ramifications if educational institutions are to respond properly to the needs of Latinos. Conditions of selection and promotion ought to facilitate rather than hinder, as they often do, the professional fulfillment of Latino members.

The reflections of the representative group of Latinas about their social, professional, and cultural experiences, and their burdens of isolation and lack of recognition, comprise a valuable source of insight into how they experience their world. They also serve as an empowering device for them, and others, to make sense of their lives, draw sustenance from their roots, and cope with the inadequacies of the situation in which they find themselves. ♡

Notes

1. This article is dedicated to the memory of Ramón J. Bucheli, who initially encouraged me to complete it because it spoke to the needs of Latinos and Latinas and expressed the passion of our educational lives. Bucheli, the director of bilingual education in Chelsea, Massachusetts, a former graduate student of mine, is remembered as a unique and committed colleague who left a great deal of himself behind.
2. The Census Bureau uses "Hispanic" as a generic term to characterize the total Hispanic population, including Mexicans, Puerto Ricans, Cubans, Central and South Americans, and "other Spanish"-origin peoples identifying themselves as Spanish, Spanish-American, Latin American, Hispano, and so forth. While Hispanic may be the most commonplace term, for the purpose of this article, I prefer the terms "Latino" as generic and "Latina" for women for their inclusiveness in describing different Latinas' experiences. However, when quoting various authors, I respect their use of Hispanic or Latino. See, for example, T. Herrera Escobedo, "Are Hispanic Women in Higher Education the Nonexistent Minority?" *Educational Researcher* 9, no. 9 (1980); R. Wilson and S. Meléndez, "Minorities in Higher Education" (Washington, D.C.: American Council on Education, 1985); V. Lee, "Access to Higher Education: The Experience of Blacks, Hispanics, and Low Socioeconomic Status Whites" (Washington, D.C.: American Council on Education, 1985); L. Darling-Hammond et al., "Career Choices for Minorities: Who Will Teach?" (Washington, D.C.: National Educational Association and Council of Chief State School Officers, Task Force on Minorities in Teaching, 1987); H. Garza and E. Cohen, "Minority Researchers and Minority Education: A Position Paper," AERA Standing Committee on the Role and Status of Minorities in Educational Research and Development, 1988; J. Chapa, "Special Focus: Hispanic Demographic and Educational Trends," in *Minorities in Higher Education*, edited by Deborah Carter and Reginald Wilson (Washington, D.C.: American Council on Education, 1991); G. Keller et al., *Assessment and Access: Hispanics in Higher Education* (Albany: SUNY Press, 1991); S. Nieves-Squires, *Hispanic Women: Making Their Presence on Campus Less Tenuous*, Project on the Status and Education of Women (Washington, D.C.: Association of American Colleges, 1991).
3. L. Johnsrud and C. Des Jarlais, "Barriers to Tenure for Women and Minorities," *Review of Higher Education* 17, no. 4 (1994): 336.
4. Nieves-Squires, *Hispanic Women*, 2.

5. I use the term "underrepresented" rather than minorities, which best characterizes issues of inequalities for different groups in the United States, to depict such a status.
6. "U.S. Equal Opportunity Commission Report," data cited in the *Chicago Tribune*, November 25, 1993.
7. Garza and Cohen, "Minority Researchers and Minority Education," 31.
8. M. A. Olivas, "Trout Fishing in Catfish Ponds," in *Minorities in Graduate Education: Pipeline, Policy, and Practice*, edited by Jessie Jones, Margaret E. Goertz, and Charlotte V. Kuh (Princeton: Educational Testing Service, 1992), 47.
9. Garza and Cohen, "Minority Researchers and Minority Education," 31.
10. Ibid., 22.
11. H. Garza, "National Latino Faculty Survey," raw data, 1987, cited in Garza and Cohen, "Minority Researchers and Minority Education," 24.
12. I. Middleman Thomas, "The Big Chill: The Ivy League Turns a Cold Shoulder toward Hispanic Professors," *Hispanic*, December 1994, 18.
13. Ibid., 22.
14. Garza, "National Latino Faculty Survey," 26.
15. *Hispanic Americans, A Statistical Sourcebook* (Detroit: Gale Research Publications, 1993).
16. The analysis of Jeffrey F. Milem and Helen Astin, "The Changing Composition of the Faculty: What Does It Really Mean for Diversity?" *Change*, March/April 1993, 21–28, raises some interesting points. According to them, the representation of underrepresented faculty in higher education has not changed between 1972 and 1989. In fact, few gains have been made by Mexican-American and Puerto Rican faculty. However, women faculty did make some gains but continue to be underrepresented at the full professor level. Today's faculty does reflect a greater awareness and sensitivity to diversity concerns even though the hiring practices do not reflect such changes.
17. Garza and Cohen, "Minority Researchers and Minority Education," 15, citing the research of A. Noboa-Rios, "An Analysis of Hispanic Doctoral Recipients from U.S. Universities, 1900–1973: With Special Emphasis on Puerto Rican Doctorates."
18. Ibid., 24.
19. Garza and Cohen, "Minority Researchers and Minority Education."
20. American Council on Education 1993.
21. According to R. J. Mengus and W. H. Exum, "Barriers to the Progress of Women and Minority Faculty," *Journal of Higher Education* 54, no. 2 (1983): 124, "During the 1970s only one woman was a full professor at Harvard; the holder of a chair endowed for a female. In 1976 Harvard had only fourteen tenured professors."
22. R. Rodriguez, "Latina Feminists Carving an Institutional Niche in Academe," *Black Issues in Higher Education*, March 1993, 28.

23. Demographic trends indicate that not only are Latinos the second fastest-growing "underrepresented" population in the United States, but by the year 2020, Latinos are expected to number between 37 million and 47 million, based on a low and high projection count of the national census. According to the American Council on Education, 1993 report, in 1980 there were 472,000 Hispanics attending institutions of higher learning, and by 1991 their numbers had risen dramatically by 84 percent to 867,000 students.
24. M. K. Chamberlain, *Women in Academe: Progress and Prospects* (New York: Russell Sage Foundation, 1988).
25. Ibid.
26. Ibid., 50.
27. Johnsrud and Des Jarlais, "Barriers to Tenure for Women and Minorities," 336.
28. S. Achor and A. Morales, "Chicanas Holding Doctoral Degrees: Social Reproduction and Cultural Ecological Approaches," *Anthropology and Education Quarterly* 21, no. 3 (1990): 269–287.
29. Ibid., 280–281.
30. Attempts at counteracting the void in the knowledge of Latinas has prompted such institutions as the Schlesinger Library of Radcliffe College to invite Latina professionals to initiate a project collecting the oral histories of Latinas in the greater Boston area under a small grant. The library has gathered oral histories of black professional women, Asian women, primarily under the Cambodian Women's Project and now Latinas. To date, eight Latinas have been interviewed and videotaped, and a videotape depicting their issues has been developed.
31. Using the notion that the U.S. society has a dominant, middle-class mainstream culture and that other subgroups have underrepresented cultures, the idea of a dominant or mainstream versus underrepresented culture is used, following the framework for empowering minorities elaborated by Jim Cummins and others.
32. *The American Heritage Dictionary*, Second College Edition (Boston: Houghton Mifflin, 1985).
33. My use of the word "Latinas" here is not to collapse all women of Latin American or Hispanic backgrounds irrespective of their national origin into one category, but more as a device to direct attention to their issues. It should be understood that I am fully aware that Latinas' experiences vary widely and that it is not useful to generalize from single experiences. Therefore, their statements and observations, reported only in terms of general explanatory power, are not at all indicative of individual differences.
34. See Mengus and Exum, "Barriers to the Progress of Women and Minority Faculty"; M. Finkelstein, *The American Academic Profession: A Synthesis of Social Scientific Inquiry Since World War II* (Columbus: Ohio State University Press, 1984).
35. Nieves-Squires, *Hispanic Women*.
36. Ofelia Miramontes, "Hispanics in Higher Education: Adaptation, Growth and Action," *SIGUE*, newsletter of the Hispanic Special Interest Group of the American Educational Research Association, Spring 1987, 7.
37. See, for example, Bernice R. Sandler with the assistance of Robert M. Hall, *The Campus Climate Revisited: Chilly for Women, Faculty, Administrators, and Graduate Students*,

Project on the Status and Education of Women (Washington, D.C.: Association of American Colleges, 1986); Nieves-Squires, *Hispanic Women*; Sara E. Meléndez and Janice Petrovich, "Hispanic Women Students in Higher Education: Meeting the Challenge of Diversity," in *Educating the Majority: Women Challenge Tradition in Higher Education*, edited by Carol S. Pearson, Donna Shavlik, and Judith Touchton (Washington, D.C.: American Council on Education/Macmillan Series on Higher Education), 1989). See also the synthesis of the symposium "The Educational Experience of Hispanic American Women" (Claremont, Calif.: Tomás Rivera Center, 1991). The outcome of this symposium led to the publication of Teresa McKenna and Flora Ida Ortiz, *The Broken Web: The Educational Experience of Hispanic American Women* (Claremont, Calif.: Tomás Rivera Center and Floricanto Press, 1988).

38. Keller et al., *Assessment and Access*.
39. Adelaida Del Castillo, Jeanie Frederickson, Teresa McKenna, and Flora Ida Ortiz, "An Assessment of the Status of the Education of Hispanic American Women," in McKenna and Ortiz, *The Broken Web*, 7–8.
40. Johnsrud and Des Jarlais, "Barriers to Tenure for Women and Minorities."
41. Ibid., 337.
42. See Margaret J. Wheatley, *Leadership and the New Science: Learning about Organization from an Orderly Universe* (San Francisco: Berrett-Koehler Publishers, 1992), in which she discusses how "We have even drawn boundaries around the flow of experience, thus shaping the way we think about the world. For example, we are conditioned to think of reality in terms of variables," 28.
43. Personal communication from Mexican researcher, field notes, 1989. A similar observation on race is made by Clara E. Rodriguez with regard to Puerto Ricans in New York. From her research, she raises the need to reconsider the concept of race in its U.S. understanding and how it is used by Puerto Ricans and other Latinos, particularly if they identify as "other Spanish" in high numbers (more than 48 percent in her study). In the United States, race is "a) an ascribed characteristic which is unchanging and generally agreed upon, and b) a physical or genotypical characteristic of individuals which is often seen in dichotomous terms, that is, as White or non-White," 377. Race appears to be as much a social as a racial term reflecting the fusion of culture as well as identity assertion. See Clara Rodriguez, "Racial Classification among Puerto Rican Men and Women in New York," *Hispanic Journal of Behavioral Sciences* 12, no. 4 (November 1990): 366–379.
44. Personal communication from Mexican-American researcher, field notes, 1989.
45. See Cherrie Moraga and Gloria Anzaldua, eds., *This Bridge Called My Back: Writings by Radical Women of Color* (New York: Kitchen Table, 1983).
46. The literature on women in academe is replete with the types of psychological and political dilemmas women in general face between their nurturing and caring role, which is often taken advantage of, and their autonomous, independent role, which they ascribe to a male-oriented academic world. Janet L. Miller describes such a dilemma in "The Resistance of Women Academics: An Autobiographical Account," in *Contemporary Curriculum Discourse*, ed. William Pinar (Tucson: Gorush, Scarisbrick Publishers, 1988), 486–494. However, a Latina academic's not only belonging to an underrepresented group but also being a woman places her in double jeopardy. This situation may be even more difficult for black Latina academicians who may experience triple jeopardy in being a woman, being ignored as a Latina, and being identified solely on the basis of skin color.
47. Personal communication from Puerto Rican teacher educator, field notes, 1992.

48. According to Judith Blomberg, in the American Association of School and Administrators survey of women, in comparison with nonminority women, underrepresented women feel the effects of race and ethnic bias on participation in their jobs. See J. Blomberg, "Diversity among Female Aspirants to Educational Administration: An Examination of Perceived Barriers to Advancement," *Research on Women and Education*, 12th Annual Conference, Diversity Among Women: Implications for Education, 1986.
49. This situation is also quite different for black Latinas, who are identified for affirmative action purposes under the rubric of black faculty/administrator or Hispanic faculty/administrator or both.
50. G. Anzaldua, "Speaking in Tongues: A Letter to Third World Women Writers," in Moraga and Anzaldua, *This Bridge Called My Back*, 166.
51. Personal communication from Honduran researcher/consultant, field notes, 1993.
52. The issue of first name usage has traditionally been employed throughout Latin America and the Caribbean to signal status differences between the *patrón* (landowner) and the peon (worker). The *patrón* referred to the worker by first name, and the peon referred to the landowner as Mr. X or Don Arturo. While the formal *usted* between persons is normally enforced, as titles and use of formal Spanish have given way to modernization and informality, the use of first names has become more widespread in some areas of Latin America and the Caribbean. In fact, *tutear* — using the informal "you" — is commonplace and an accepted form of communication signifying greater intimacy. It is used among Caribbean peoples and those who know one another or have acknowledged the use of *tu*. Thus, being on a first-name basis with a teacher changes status role differences and creates a sense of intimacy that is usually shared with those you know well. Within the academic circles of Latin America, deference and respect for authority and age demand formal usage of titles and names. Hence professors are referred to in terms of their titles and degrees, for example, *el licenciado Rodriguez*, *Doctora Mendoza*, or *Profesor Moreno*. Among same-age peers or colleagues, the use of the first name and the informal *tu* or *vos* instead of *usted* is widespread and connotes equal membership.
53. In rural areas of Latin America, physical punishment by teachers may be condoned by parents, as in their minds it enforces their own authority. Punishment may be accrued for not knowing one's lessons or misbehaving; at the higher education level, expressions of negative reinforcement by professors to mold the students through public display may be regarded as acceptable.
54. Personal communication from Argentine faculty member, field notes, 1985.
55. The majority of the women I surveyed for this article commented about the frequency with which they were asked if they understood a presentation, especially if they remained silent throughout. Several noted that other faculty would respond to them by speaking slowly or simply asking what they understood.
56. Examples occur when a young Latina in higher education includes the family in the decisions for her career options. Within the U.S. context, this is an individual's prerogative, but among many Latinos, the power of your decision carries social consequences that affect the family or group as well.
57. For some of the Puerto Rican women, particularly those from the island, saying the *ay bendito*, meaning "Oh my God," or "Holy God," offers a degree of psychological respite from the hardships of daily life. Yet the *ay bendito* also refers to "Life is so hard" or even "Woe is me" and demands pity from those who are in better straits. That is why some Puerto Ricans may respond to the *bendito* with remarks such as *pobrecito* or

- pobrecita*, "poor helpless one." So the *ay bendito* can be used to excuse a person from social obligations since he or she may be acting as a victim.
58. H. T. Trueba, "Mentoring," *SIGUE*, newsletter of the Hispanic Special Interest Group of the American Educational Research Association, Winter 1988.
 59. Personal communication from Mexican-American faculty member, field notes, 1980.
 60. Finkelstein, *The American Academic Profession*; Chamberlain, *Women in Academe*.
 61. Among one of the most common expressions of this homogeneity reported by nearly all the Latinas was the frequency with which they were addressed at meetings or conferences as "Maria," particularly when people did not remember their names and "Maria" seemed to fit.
 62. T. Herrera Escobedo, "Are Hispanic Women in Higher Education the Nonexistent Minority?" *Educational Researcher* 9, no. 9 (1980).
 63. Personal communication from Puerto Rican researcher, field notes, 1983.
 64. For an extended discussion of the academic rituals surrounding Chicanos in higher education, see María de los Reyes and John H. Halcón, "Racism in Academia: The Wolf Revisited," *Harvard Educational Review* (1988): 299-314.
 65. Ibid.
 66. Ibid., 303-308.
 67. Ibid., 309-310.
 68. Personal communication from Puerto Rican researcher educator, field notes, 1991.
 69. Personal communication from Chicana researcher, field notes, 1982.
 70. Personal communication from Mexican educator, field notes, 1993; Stepford wives syndrome refers to the title of a movie, *The Stepford Wives*, in which all the women in a town have been brainwashed to act nicely toward their often abusive husbands.
 71. Adela de la Torre and Beatriz M. Pesquera, *Building with Our Own Hands: New Directions in Chicana Studies* (Los Angeles: University of California Press, 1993).
 72. Roberto Rodriguez, "Latina Feminists Carving an Institutional Niche in Academe," *Black Issues in Higher Education* 10 (1993): 26-28.
 73. See, for example, the literary work of Isabel Allende, Elena Poniatowska, Domitila Barrios de Chugara, Rigoberta Menchu.
 74. B. Smith and B. Smith, "Across the Kitchen Table: A Sister to Sister Dialogue," in Moraga and Anzaldúa, *This Bridge Called My Back*, 61.
 75. Puerto Rican women's oral histories derived from their experiences within adult education programs have been compiled in the El Barrio Popular Education Program by Rina Benmayor, Pedro Pedraza, and Rosa Torruelas of the Centro de Estudios Puertorriqueños, Hunter College.
 76. J. Moschkovich, "But I Know You, American Woman," in Moraga and Anzaldúa, *This Bridge Called My Back*, 83.

77. Ibid.
78. L. Stoner, "Directions in Latin American Women's History, 1977-1984," *Latin American Research Review* 22, no. 2 (1987): 109.
79. Ibid.
80. See the publications of *Chicana Voices: Intersections of Class, Race, and Gender of the National Association for Chicano Studies* (CMAS Publications, 1986), and de la Torre and Pesquera, *Building with Our Own Hands*, as examples of this expanding literature.
81. de la Torre and Pesquera, *Building with Our Own Hands*, 6.
82. One of the organizations credited with pioneering Latina feminist scholarship is Mujeres Activas en Letras y Cambio Social (MALCS), founded in 1981.
83. Rodriguez, *Latina Feminists Carving an Institutional Niche*, 26.
84. Nieves-Squires, *Hispanic Women*, and B. Sandler and R. Hall, *The Classroom Climate: A Chilly One for Women? Project on the Status of Women* (Washington, D.C.: Association of American Colleges, 1986).
85. M. Olivas, "Trout Fishing in Catfish Ponds," in *Minorities in Graduate Education: Pipeline, Policy, and Practice*, edited by Jessie Jones et al. (Princeton: Educational Testing Service, 1992).
86. Ibid.
87. Johnsrud and Des Jarlais also concur with Michael Olivas about the use of qualitative research to indicate collective perceptions about the roles of ethnically underrepresented faculty at predominantly white faculty institutions.
88. Chapa, "Special Focus."
89. C. Maitland, "The Inequitable Treatment of Women Faculty in Higher Education," in *Women in Higher Education*, ed. Lynn B. Welch (Westport, Conn.: Praeger, 1990), 253.
90. *Hispanics in Higher Education in Connecticut* is a good example of a state organization that has successfully overturned tenure denial for several faculty.
91. According to Roberto P. Haro and Guillermo Rodriguez, Jr., "Few Latino Faculty, Officials Hired by UC, Cal State," *Crosstalk*, California Higher Education Policy Center, October 1994, "As of December 1993, there were only 198 Hispanics among the 4,936 tenured faculty at the 8 UC undergraduate campuses. In the entire UC system, there are only 36 tenured Latina faculty, and two intend to retire before the end of this year. At the nine UC campuses, Latino faculty are increasing at a rate of twelve hundredths of one percent annually. At this rate of 'progress,' Latino faculty will approximate 1990 population parity in the year 2175."

“Most Puerto Ricans, unlike blacks and Mexicans, face the extreme social ills of the urban ghetto daily. These areas offer little protection against family instability and school decline, and one consequence may be poor educational outcomes.”

*— Katherine M. Donato
Roger A. Wojtkiewicz*

The Educational Achievement of U.S. Puerto Ricans

Katharine M. Donato, Ph.D.

Roger A. Wojtkiewicz, Ph.D.

With longitudinal data, this article extends to the 1990s research on minority educational achievement and emphasizes the experiences of Puerto Ricans. The authors' results suggest that compared with whites, blacks, and Mexicans, Puerto Ricans exhibit the lowest high school graduation rates and that their educational disadvantage is unique. Even if Puerto Ricans assumed the attributes of whites, they would graduate at lower rates than the latter. This finding, which has serious implications, deserves priority in the agendas of scholars and policy specialists alike.

Traditional indicators of educational achievement indicate that Puerto Ricans in the United States are a disadvantaged group. They display lower educational attainment and higher rates of school delay and noncompletion than any other group.¹ Although prior research suggests that both ethnicity and socioeconomic status shape the educational trajectories of Puerto Rican youth, policymakers have been unable to decide exactly how schools should form programs to improve performance.

Like many others, we believe that Puerto Ricans' low attainment levels are problematic for two reasons. First, their disadvantage persisted while the educational achievements of the total population were increasing.² Second, it is strongly linked to declines in economic status, as evidenced in the mid-1980s by the high unemployment and poverty rates and low labor-force participation rates of Puerto Ricans.³ As a result, the educational crisis of Puerto Ricans stretches well beyond school corridors.

The objective of our study is to extend to the 1990s research that has documented ethnic-group differences in educational achievement, emphasizing the experiences of Puerto Ricans. We therefore evaluate whether and how this population is worse off relative to other groups and if their disadvantage remains after we apply controls for two sources: family background and ethnic status. We begin our study with a review of prior research, following with a description of our data and testable propositions about the influence of these two sources. Using longitudinal data, we subsequently describe our empirical results, finally discussing the policy issues implied by these findings.

Our study suggests that the educational disadvantage of Puerto Ricans is unique. Even if they assumed the attributes of whites, they would still graduate at lower rates than whites. In this scenario, however, the situation for blacks would improve. A prior

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study showed that if blacks were armed with the characteristics of whites, their educational achievement would be comparable to that of whites.⁴ Therefore, because of its serious implications, the Puerto Rican educational disadvantage deserves priority in the agendas of researchers and policy specialists alike.

Lessons from Previous Studies

Past studies have established that educational attainment is determined by characteristics related to family background, immigration status, schools, and communities.⁵ Although each represents a constellation of variables appearing in a multitude of studies, together they comprise the factors influencing educational attainment. Their use in models of educational attainment yields interesting twists that differentiate race and ethnic groups.

For example, family background affects the educational experiences of Puerto Ricans and blacks differently from the ways it affects Mexicans.⁶ Like many U.S. blacks, Puerto Ricans are more apt than whites to live with many siblings in a large family headed by a single parent and with parents who did not graduate from high school. Mexicans live in families with different structures. Although they usually have many siblings and parents who did not complete high school, Mexicans are far more apt than Puerto Ricans or blacks to live in two-parent families, which average higher graduation rates than single-parent families.

Despite the poor outcomes of Puerto Ricans documented in the 1980s, we know of no study that has explicitly focused on differences between Puerto Ricans and other groups. This is especially surprising because what is remarkable about Puerto Ricans, compared with all other race and ethnic groups, is the ambivalence surrounding their immigration status to the U.S. mainland.⁷ Unlike that of Mexicans, Cubans, and many others, Puerto Ricans' decision to migrate involves little risk, because as U.S. citizens they may cross the border freely. Moving to the mainland, therefore, may mean something different from moving across an international border.

As a result, immigration-related attributes may have different effects for Puerto Ricans in comparison with other groups, the impact of nativity being a case in point. In general, foreign birth depresses the educational levels of Hispanics, especially those of Mexicans, who register next to the lowest high school graduation rates.⁸ Although at face value this is a straightforward effect, it is less so for Puerto Ricans born on the island. Despite past efforts to stimulate development, economic marginality is a way of life for many of them.⁹ With migration to the mainland, such marginality subsequently shifts and becomes reinforced where, as citizens, Puerto Ricans live in one of the wealthiest nations in the world but often in the most socially disorganized, inner-city neighborhoods.¹⁰ Therefore, understanding how nativity operates to influence Puerto Rican educational outcomes is part of a larger story about how birthplace differentiation has changed over time.

For example, one study documents three patterns of nativity differentials in education among Hispanics during the years 1960 to 1980.¹¹ For Mexicans, the authors observed widening nativity differentials. Among other Hispanics and Cubans, however, the median education gap between the foreign born and U.S. born has converged. In this context, the birthplace effects for Puerto Ricans were unusual; the median education gap between those born on the island and mainland rose in the 1960s, but dropped back to its 1960 level by 1980. On the basis of prior research,¹² the authors speculated that the pattern derived from "the interaction of rising education levels on both the island and mainland (albeit at different rates), coupled with changes over time in the selectivity of return and first-time migrants."¹³

These nativity patterns set the context for understanding differences in the educational outcomes between Puerto Ricans and others in the 1990s. Together they suggest a strong birthplace effect for Mexicans, weaker effects for Puerto Ricans and other Hispanics, and little or no effect for Cubans. In addition, they imply differences in other immigration-related characteristics, such as language, especially among recent immigrants.¹⁴

Data and Methods

The source of our data is the National Longitudinal Survey of Youth, which is based on a national probability sample of men and women first interviewed in 1979 when they were between the ages of 14 and 21, then every year thereafter. To ensure wide representation and adequate sample sizes, the cross-sectional sample was supplemented with subsamples of groups with typically low representation in national surveys: minorities, economically disadvantaged non-Hispanic whites, and persons in the military.

The survey is a rich source of information about the labor force and the educational transitions of young adults as they move into adulthood. In addition, it has an excellent response rate. Excluding the military subsample, approximately 90 percent of respondents interviewed in 1979 were interviewed again in 1988.¹⁵ For our study, we use data on non-Hispanic whites, blacks, Mexicans, and Puerto Ricans from the cross-sectional sample and the black and Hispanic supplemental subsamples from the 1979 through 1990 waves of the survey.

Measurement

We focus on high school graduation because it provides the basic skills necessary for full-time employment. Although only one of several educational transitions, it is also where much of the inequality in educational outcomes first appears.¹⁶ We use maximum likelihood logistic regression procedures to predict the dichotomous dependent variable, high school graduation. We coded respondents as 1 if they completed 12 years of school by age 25, 0 otherwise. The age restriction is necessary to accommodate the many Puerto Ricans and other Hispanics who graduate at older ages. Moreover, to avoid imprecisely measuring the dependent variable, high school graduates do not include persons who received a general equivalency degree.

Our independent variables include race and ethnicity, nativity, and family structure. We measure race and ethnicity using survey information about a respondent's origin and descent. When more than one origin was mentioned, we used the origin with which respondents reported identifying most closely. Therefore, Puerto Ricans and Mexicans are persons of Puerto Rican or Mexican heritage either by birth or by ancestry.

To create the nativity variable, we used information from respondents about whether they were born in the United States. For those born in the United States or its territories, we were able to identify those of Puerto Rican origin who were born in Puerto Rico. We also include two variables closely related to nativity. One is whether a foreign language was spoken at home during the respondent's childhood. By including this variable in the analysis, we assess the degree to which nativity captures the effects of weaker English language skills. The second variable is residence at age 14, which allows us to consider the extent to which the nativity effect is a factor of growing up in nations where dropping out of school at young ages may occur more often than in the United States. Because a precise measure of length of U.S. stay is not part of the survey, residence at age 14 also provides a rough control for the length of time respondents have been in the United States. Finally, we include family structure, sibling size,

and parental education in our models because these variables strongly influence high school completion.

Data Analysis

Our analysis begins with a description of differentials in high school graduation among Puerto Ricans, Mexicans, blacks, and non-Hispanic whites. Its focus is on the relation of educational achievement to group differences in social and economic composition. These tabulations provide the foundation for comparing effects derived from subsequent analyses.

We then formally test for significant group differences, predicting the probability of high school graduation as a function of family background and immigration status. The first model takes the following form:

$$\text{HSG} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon \quad (1)$$

where

HSG = the probability of graduating from high school;

X_1 = a vector of dummy variables for race and ethnicity. Persons who were, either by birth or ancestry, Puerto Rican were placed in the reference category; persons reporting Mexican birth or ancestry were coded as 1, otherwise as 0; those reporting black birth or ancestry were coded as 1, otherwise as 0; and non-Hispanic whites were coded as 1, otherwise as 0.

X_2 = a dummy variable for the sex of respondent (1 = female, 0 = male); and ε = a disturbance term.

This model allows us to evaluate overall race and ethnic differences in the chances of completing high school. To determine whether nativity and cultural status are sources of group differences, we introduce in the first model the following variables:

$$\text{HSG} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_6 X_6 + \varepsilon \quad (2)$$

where

HSG, X_1 , and X_2 are defined as in the prior equation; and

X_3 = a dummy variable for whether Puerto Ricans were island born or other respondents were foreign born (1 = yes, 0 otherwise);

X_4 = a dummy variable for whether respondents spoke a foreign language at home (1 = yes, 0 otherwise);

X_5 = a dummy variable for whether respondents resided in the United States at age 14 (1 = yes, 0 otherwise);

X_6 = a dummy variable for the sex of respondent (1 = female, 0 = male); and ε = a disturbance term.

To determine whether and how family background characteristics comprise an alternate source of observed group differences, we then include the following variables in a third model:

$$\text{HSG} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_9 X_9 + \varepsilon \quad (3)$$

where

HSG and X_1 – X_6 are defined as in the prior equation; and

X_7 = a dummy variable for whether respondents lived with only one parent at age 14 (1 = yes, 0 otherwise);

X_8 = a dummy variable representing whether respondents lived in large families with at least four siblings (1 = yes, 0 otherwise);

X_9 = a dummy variable representing whether parents did not graduate high school (1 = yes, 0 otherwise); and

ε = a disturbance term.

This final equation is the baseline model for our analysis of interactions. It indicates whether and how group differences change after we introduce controls for family background and immigration status.

Overall, we expect Mexicans, blacks, and whites to have higher rates of high school graduation than Puerto Ricans. Furthermore, we expect the sources of group differences to vary depending on the two groups being compared. For example, we expect that the underlying reason why blacks have higher high school completion rates than Puerto Ricans is because blacks are less likely to have the immigration attributes of Puerto Ricans. On the other hand, we expect whites to maintain their advantage over Puerto Ricans because whites are less likely to have disadvantaged family characteristics associated with lower educational achievement. Finally, on the basis of the nativity trends outlined earlier, we hypothesize that birthplace accounts for less of the educational difference between Puerto Ricans and Mexicans than the differences between Puerto Ricans and other groups.

Because these results suggest that Puerto Rican heritage yields a unique disadvantage, the second part of our analysis tests whether the process of educational inequality for Puerto Ricans is really different from that of other groups. To do this, we first assess whether the effects of each of the independent variables differ among race and ethnic groups, test to see exactly which of the differences are significant. To determine whether the effect of nativity, for example, differs among race and ethnic groups, we introduce in the baseline model interaction terms between two nativity types and the four ethnic groups:

$$\text{HSG} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_9 X_9 + \beta_{10} X_1 X_2 + \varepsilon \quad (4)$$

Equation 4 indicates whether educational returns to nativity differ according to race and ethnicity.

We follow by estimating similar models with interactions between each group and each value of an independent variable, then test for the significance of all the differences using the -2 log likelihoods between the baseline and each interaction model. We expect to reject the null hypothesis that there is no significant difference between the baseline and interaction models. Finally, to provide further information about exactly which differences are significant, we present the interaction coefficients for those sets of interactions which significantly improved the fit of the model.

Descriptive Analysis

Graduation Rates

Consistent with previous findings, our results in Table 1 show that Puerto Ricans have the lowest high school graduation rates. Approximately 58 percent graduated from high school compared with 63 percent of Mexicans, 75 percent of blacks, and 85 percent of whites. Furthermore, as expected, being foreign born, speaking a foreign language, and residing outside the United States lowered the chances of graduating from high school.

Table 1

Unweighted Frequency and Percentage of High School Graduates

	Frequency	Percentage ^a
Race/Ethnicity		
Puerto Rican	245	58.0
Mexican	959	63.1
Black	2,290	75.0
Non-Hispanic white	4,145	85.2
Nativity		
U.S. born	7,156	83.1
Foreign born	483	68.3
Foreign Language		
No	6,111	83.5
Yes	1,528	73.9
Residence at Age 14		
In United States	7,493	82.8
Outside United States	146	60.4
Family Structure		
Two parents	5,456	86.4
Single/stepparent	2,183	68.8
Siblings		
0–3	4,172	86.3
4 or more	3,467	75.9
Parent(s) High School		
Graduate	5,090	88.0
Nongraduate	2,549	63.1
Sex		
Male	3,745	80.7
Female	3,894	84.4
Total	7,639	82.6

^a Percentages are calculated from sample weights.

Of the family background characteristics, the largest graduation gap is found for parental education. Fully 88 percent of respondents whose parents completed high school did so themselves, compared with 63 percent of respondents whose parents did

not. In addition, respondents living in a single-parent household with many siblings produced lower graduation rates than their counterparts.

Distributions

Table 2 reveals that Puerto Ricans, in comparison with whites, are more likely to have background characteristics that have traditionally led to lower educational achievement. For example, Puerto Ricans are more likely than other groups to be born off the mainland, speak a foreign language, and live in single-parent families as children. However, with respect to other background attributes, Puerto Ricans are better off than other groups. Thus, Mexicans are much more likely to live in large families and have parents who did not graduate from high school. Furthermore, even though Mexicans are the most likely to have lived outside the United States at age 14, far more Puerto Ricans than whites or blacks report such residence.

Table 2
Percentage Distribution for Background Variables by Race/Ethnicity

	Puerto Rican	Mexican	Black	White
Nativity				
U.S. born	65.5 ^a	75.7	97.9	97.4
Foreign born	34.5	24.3	2.1	2.6
Foreign Language				
No	4.8	7.9	98.3	91.6
Yes	95.2	92.1	1.7	8.4
Residence at Age 14				
In United States	94.4	90.9	99.6	99.1
Outside U.S.	5.6	9.1	0.4	0.9
Family Structure				
Two parents	53.1	76.3	54.7	82.6
Single/stepparent	46.9	23.7	45.3	17.4
Siblings				
0–3	45.7	36.4	42.5	69.4
4 or more	54.3	63.6	57.5	30.6
Parent(s) High School				
Graduate	39.1	31.9	58.4	84.5
Nongraduate	60.9	68.1	41.6	15.5
Sex				
Male	50.0	46.5	48.2	50.2
Female	50.0	53.5	51.8	49.8
Total	245	959	2,290	4,145

^a Percentages are calculated from sample weights.

Although these differences may suggest considerable diversity between the two Hispanic groups, the distributions also show considerable heterogeneity between whites

and blacks. Whites are more likely than blacks to speak a foreign language, whereas blacks are much more likely than whites to live in families with single heads, many children, and parents who never finished high school. Their disadvantaged family backgrounds, in terms of structure and sibling size, are roughly comparable with those of Puerto Ricans, but disproportionately more blacks had parents who completed high school.

Multivariate Analysis

The Puerto Rican Disadvantage

Table 3 reveals race and ethnic differentiation in high school graduation. We begin by describing the group effects found in Model 3.1. Comparing the probability of high school graduation for different groups without including the relevant controls, we find that Mexicans, blacks, and whites have significantly higher chances than Puerto Ricans of finishing high school, and women have better chances than men of doing so.

Table 3

Logistic Regression of High School Graduation on Race/Ethnicity and Background Variables						
	Model 3.1		Model 3.2		Model 3.3	
	Coeff.	SE	Coeff.	SE	Coeff.	SE
Race/Ethnicity	contrast		contrast		contrast	
Puerto Rican						
Mexican	.346*	.145	.345*	.149	.270*	.157
Black	.894*	.137	.743*	.182	.725*	.194
Non-Hispanic white	1.457*	.135	1.316*	.175	.682*	.188
Nativity			contrast		contrast	
U.S. born	—					
Foreign born	—		-.403*	.122	.313*	.131
Foreign Language			contrast		contrast	
No	—					
Yes	—		.063	.124	.160	.133
Residence at Age 14			contrast		contrast	
In U.S.	—					
Outside U.S.	—		-1.148*	.201	-1.155*	.210
Family Structure					contrast	
Two parents	—		—			
Single/stepparent	—		—		-.738*	.063
Siblings					contrast	
0-3	—		—			
4 or more	—		—		-.432*	.062
Parent(s) High School					contrast	
Graduate	—		—			
Nongraduate	—		—		-1.009*	.065

Table 3, continued

	Model 3.1		Model 3.2		Model 3.3	
	Coeff.	SE	Coeff.	SE	Coeff.	SE
Sex						
Male	contrast		contrast		contrast	
Female	.323*	.056	.318*	.056	.373*	.059
Intercept		.007		.17		1.322
-2 log likelihood	7,902.11		7,829.69		7,309.94	
N	7,639		7,639		7,639	
DF	7,634		7,631		7,628	

*p = <.10, two-tailed test.

Race and ethnic group differences remained salient after we controlled for immigration status (see Model 3.2). For example, essentially none of the difference between Puerto Ricans and Mexicans is explained after these variables are introduced. And, although differences between Puerto Ricans and blacks and Puerto Ricans and whites narrowed when we controlled for immigration status, appreciable gaps between these groups remained. Therefore, our results suggest that Puerto Ricans differ from blacks and whites partly because they are more likely to have immigration attributes that are linked to lower educational outcomes.

Although still significantly different from Puerto Ricans, Mexicans and whites become noticeably less advantaged after we controlled for family background (see Model 3.3). Thus, much of the advantage of Mexicans and whites over Puerto Ricans is related to family attributes that lower high school achievement rather than those related to immigration status. Nonetheless, despite the power of family background, significant group differences remain after our controlling for these attributes. Furthermore, in comparison with blacks, Puerto Ricans are worse off because their ethnicity is linked to immigration-related attributes, which lower their chances of completing high school, rather than family background.

The point estimates reported in Table 3 for the controls contain few surprises. In general, foreign birth and residence outside mainland United States at age 14 reduce the probability of completing high school while being female increases the chances of graduating, which is consistent with prior studies.¹⁷ Finally, even the effect of foreign language is not surprising. Most studies document that bilingualism does not depress educational achievement.¹⁸ Although this effect contrasts with popular beliefs about bilingualism, other studies provide even more counterintuitive findings, suggesting that bilingualism may actually lead to higher educational attainment if it is combined with English competency.¹⁹

The Differential Process of Educational Inequality

So far, our multivariate analysis has assumed that the process of educational inequality is the same for all groups. Table 4 presents global tests of significance for this assumption

by presenting -2 log likelihood statistics of the baseline and interaction models. Differences between baseline and interaction models are significant for five of the seven models.

Table 4

**Logistic Regressions for the Interaction of Race/Ethnicity
with Other Independent Variables**

Difference from Model 3.3				
Interaction	-2 Log L	DF	-2 Log L	DF
Baseline Model	7,309.94	7,628	—	—
Nativity	7,301.43	7,625	8.51*	3
Foreign Language	7,308.56	7,625	1.38	3
Residence at Age 14	7,285.22	7,626	24.72*	2
Family Structure	7,285.57	7,625	24.37*	3
Siblings	7,309.24	7,625	0.70	3
Parent(s) High School	7,273.17	7,625	36.77*	3
Sex	7,298.07	7,625	11.87*	3

* $p < .10$.

These findings therefore reveal that ethnic-specific returns to education vary significantly by nativity, residence at age 14, sex, family structure, and parental education. Even though ethnic-specific returns do not vary by foreign language and sibling size, the findings suggest that educational inequality for race and ethnic groups is considerable across the other dimensions.

Uniqueness of Puerto Ricans

To provide further information about how differences in the process of educational inequality operate, Table 5 presents coefficients for those sets of interactions which significantly improved the fit of our model. Overall, they document the difference between the process of educational attainment for Puerto Ricans and the experience for other groups. With respect to nativity, for example, Puerto Ricans are similar to blacks and whites; the difference between those who are foreign and U.S. born has no effect on their educational outcomes. It is significant, however, for Mexicans, for whom foreign birth lowers the chances of high school graduation.

Table 5

**Logistic Regression Coefficients for the Effects
of Selected Independent Variables by Race/Ethnic Group**

	Coefficient	SE
Nativity		
Puerto Rican	-.196	.286
Mexican	-.604*	.175
Black	-.581	.494
Non-Hispanic white	-.003	.294

Table 5, continued

	Coefficient	SE
Residence at Age 14		
Puerto Rican	-1.521*	.624
Mexican	-1.953*	.315
Non-Hispanic white/black	.287	.482
Family Structure		
Puerto Rican	-.571*	.275
Mexican	-.325*	.164
Black	-.533*	.099
Non-Hispanic white	-1.091*	.095
Siblings		
Puerto Rican	-.843*	.301
Mexican	-.770*	.169
Black	-.634*	.100
Non-Hispanic white	-1.441*	.096
Sex		
Puerto Rican	.534*	.277
Mexican	.116	.144
Black	.632*	.101
Non-Hispanic white	.259*	.087

*p = <.10.

In contrast, Puerto Ricans are similar to Mexicans in that differences between residence and nonresidence in the United States at age 14 are extremely important in explaining their lower completion rates.²⁰ Furthermore, Puerto Ricans are comparable to Mexicans, as well as to blacks and, to some extent, to whites in the degree to which differences in family structure and sibling size reduce high school graduation rates. However, the effects are especially large for whites, for whom they represent major disadvantages that lower the probability of their graduating from high school.

Being female safeguards graduation from high school among Puerto Ricans, blacks, and whites. Black and Puerto Rican women in particular gain the most, relative to their male counterparts. For Mexicans, however, women's completion rates comparable with those of men.

Discussion

Using longitudinal data, we have documented the extent to which Puerto Ricans are disadvantaged with respect to graduating from high school and therefore obtaining the basic skills necessary for full-time employment. Relative to whites, blacks, and Mexicans, Puerto Ricans have the lowest high school graduation rates. Moreover, these differences are sustained net of relevant controls.

In a prior study on Hispanic educational achievement, we explained the disappearance of differences between whites and blacks in high school and college graduation rates after we controlled for family background.²¹ These findings suggest that if blacks had the characteristics of whites, their educational achievement would be comparable to that of whites. However, findings from this study suggest the Puerto Rican disadvantage

is unique. Even if Puerto Ricans assumed the attributes of whites, their high school graduation rates would remain lower than those of whites.

These findings are provocative. They convey a mandate for future research and innovative public policy. Researchers face the challenge of unraveling exactly what accounts for the unusual disadvantage Puerto Ricans experience. One crucial explanation may lie in the quality of the schools they attend and another in the stability of their families. We suspect that both are linked to the concentration of Puerto Ricans in inner-city neighborhoods in the Northeast, Chicago, and Florida. Most Puerto Ricans, unlike blacks and Mexicans, face the extreme social ills of the urban ghetto daily. These areas offer little protection against family instability and school decline, and one consequence may be poor educational outcomes.

Residential segregation patterns of Puerto Ricans and Mexicans may also account for differences in the rates of high school completion for the two groups. However, no matter what the reason for the problem, it deserves priority in the agendas of social researchers because its implications are serious. Only with a better understanding can policymakers design multifaceted solutions to eradicate the severe educational disadvantages of Puerto Ricans. 🐾

Notes

1. National Council of La Raza, *The Decade of Hispanics: An Economic Retrospective* (Washington, D.C.: National Council of La Raza, 1990); Robert D. Mare and Christopher Winship, "Ethnic and Racial Patterns of Education Attainment and School Enrollment," in *Divided Opportunities: Minorities, Poverty, and Social Policy*, edited by Gary D. Sandefur and Marta Tienda (New York: Plenum Press, 1988), 173–194; Frank D. Bean and Marta Tienda, *The Hispanic Population of the United States* (New York: Russell Sage, 1987).
2. D. J. Carter and R. Wilson, *10th Annual Status Report of Minorities in Higher Education* (Washington D.C.: American Council on Education, 1992); Bean and Tienda, *The Hispanic Population*.
3. Rebecca Morales and Frank Bonilla, *Latinos in a Changing U.S. Economy: Comparative Perspectives on Growing Inequality* (Newbury Park, Calif.: Sage Publications, 1993); Marta Tienda and Katharine M. Donato, "Labor Market Activity of Minority Men: 1960–1980," 1993; Marta Tienda, Katharine M. Donato, and Hector Cordero-Guzmán, "Schooling, Color, and the Labor Force Activity of Women," *Social Forces*, no. 71 (1992): 365–398; Marta Tienda and Leif Jensen, "Poverty and Minorities: A Quarter-Century Profile of Color and Socioeconomic Disadvantage," in Sandefur and Tienda, *Divided Opportunities*, 23–62.
4. Roger A. Wojtkiewicz and Katharine M. Donato, "Hispanic Educational Attainment: The Effects of Family Background and Nativity," Louisiana State University, 1993.
5. Ibid.
6. Ibid; Sara McLanahan and Larry Bumpass, "Comment: A Note on the Effect of Family Structure on School Enrollment," in Sandefur and Tienda, *Divided Opportunities*, 194–202; Mare and Winship, "Ethnic and Racial Patterns."
7. Bean and Tienda, *The Hispanic Population*.
8. Mare and Winship, "Ethnic and Racial Patterns."

9. Operation Bootstrap, implemented in 1948-1965, was designed to modernize the plantation economy but failed to produce industrial development and employment (see Moralez and Bonilla, *Latinos in a Changing U.S. Economy*).
10. Douglas S. Massey and Nancy Denton, *American Apartheid: Segregation and the Making of the Underclass* (Cambridge, Mass.: Harvard University Press, 1993).
11. Bean and Tienda, *The Hispanic Population*.
12. Wilma Ortiz, "Changes in the Characteristics of Puerto Rican Migrants from 1955 to 1980," Educational Testing Service, Princeton, 1985.
13. Bean and Tienda, *The Hispanic Population*, 237.
14. Ibid.
15. Center for Human Resource Research, *NLS Handbook 1991* (Columbus, Ohio: Center for Human Resource Research, 1991).
16. McLanahan and Bumpass, "Comment," 194-202; Robert D. Mare, "Change and Stability in Educational Stratification," in *American Sociological Review*, no. 46 (1981): 72-87.
17. Bean and Tienda, *The Hispanic Population*.
18. Neil Fligstein and Roberto M. Fernandez, "Hispanics and Education," in *Hispanics in the United States*, edited by Pastora San Juan Cafferty and William C. McCready (New Brunswick, N.J.: Transaction, 1985), 113-146.
19. Marta Tienda, "Sex, Ethnicity and Chicano Status Attainment," in *International Migration Review*, no. 16 (1982): 435-472; Alberto Lopez, "The Puerto Rican Diaspora," in *Puerto Rico and Puerto Ricans*, edited by Alberto Lopez and James Petras (Cambridge, Mass.: Schenkman, 1974).
20. We collapsed whites and blacks because not enough blacks lived out of the country at age 14 to allow us to estimate a separate effect for them.
21. Wojtkiewicz and Donato, "Hispanic Educational Attainment."

“Latino families negotiate the ordinary changes of the family life cycle along with many additional stresses of economic hardship, cultural dislocation, and discontinuity. At the same time, the challenge of collaboratively integrating a complex, culturally diverse life experience can lead to creative adaptive strategies featuring a more perspectivistic or complex view of self and others.”

— Ester R. Shapiro

Family Development in Cultural Context

Implications for Prevention and Early Intervention with Latino Families

Ester R. Shapiro, Ph.D.

An integrative model of family development in cultural context is presented as an organizing conceptual framework for supporting the optimal development of Latino children and families. This social developmental approach locates individual developmental outcomes within nested structures of family, community, and culture, each offering resources as well as potentially presenting stresses. This model also considers social attitudes such as racism or as potential risks or burdens for Latino families and suggests ways to address these social risks at individual, familial, and social levels. The article describes two exemplary prevention and early intervention programs for Latino parents and children; focusing on early infancy and transition to parenthood, they work from a multidimensional, risk-reduction, and resource-enhancement approach. A social developmental conceptual framework that recognizes the conditions of social adversity which characterize the lives of many Latino families highlights the resourcefulness and resilience of Latinos when their cultural and collective strengths are mobilized on behalf of their own development.

Family-based conceptual models have been proposed as the essential foundation for providing prevention and early intervention services to Latino families.¹ Yet it is difficult to make systematic public policy decisions on behalf of Latino families when the fields of prevention and early intervention are plagued by fragmentation and lack of cultural sensitivity in conceptual frameworks, research approaches, and models of service delivery. I offer a family developmental perspective in social and cultural context as the organizing conceptual framework for designing, providing, and evaluating prevention and early intervention services to Latino families.²

A family developmental approach to prevention and early intervention views individual development in family and cultural context and sees family life-cycle transitions as opportunities to enhance developmental outcomes for both children and adults. Such an approach views the adult not just as parent or potential parent, which is characteristic of family support programs, but also as a developing individual with other personal needs whose satisfaction enhances or detracts from his or her ability to parent successfully. The application of this family developmental model for providing more culturally responsive and coherent prevention and intervention services for Latino families is demonstrated through a focus on family support programs that target the transition to

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parenthood and early child development as a family life-cycle transition during which intervention can enhance an ongoing shared developmental process. Early intervention programs that focus on the developmental needs of both children and parents leverage adults' commitment to the needs of their children as agents of adult and family change.

Problem Prevention and Public Health Psychology: Contributions of a Social Developmental Approach

The past several decades have seen the burgeoning of a social developmental literature that explores the continuum between normal and symptomatic child, adult, and family development in ecological or systemic context. These social developmental models provide both a conceptual framework and a basis for intervention that can do justice to the complex factors contributing to Latino child and family development under circumstances of migration and cultural change. Sources in this literature include the work on the ecology of human development of Bronfenbrenner and his colleagues;³ the work on developmental psychopathology of Rutter, Garnezy, Cicchetti, and colleagues, who have studied resilient development under circumstances of adversity;⁴ the work on intergenerational determinants of attachment as they impact on child and adult outcomes of Bowlby and his colleagues;⁵ the work of family systems theorists, clinicians, and researchers who have focused on the family context of development;⁶ and the work of researchers and practitioners in infant mental health and early intervention who seek to enhance developmental outcomes and prevent psychopathology for infants and their caretakers.⁷ These approaches locate both child and adult development in relational and social context, seeing individual growth as evolving in "nested structures" of family and extended family, peer, institutional, community, and cultural relationships and contexts.

From these social developmental perspectives, resilience is viewed as a quality not only of the individual but also of the social environment, and the outcome of development is determined by the child and family's unique, distinctive use of a configuration of resources to manage potential sources of stress. These sources of support or resources and sources of stress or risk, which can come from individual, family, community (neighborhood, school), and cultural domains, can change in their configuration and impact over the course of development.

Seeking to establish the continuity between normal and symptomatic developmental outcomes, these approaches have generated a substantial body of empirical research identifying risk and protective factors that contribute to resilient or pathological development in both normal and at-risk populations of children and adults. This literature has been characterized by strong links between theory, research, and clinical application in prevention programs that seek to maximize resources and minimize stresses in at-risk populations.⁸ Intervention approaches from a social developmental perspective suggest that developmental transitions are powerful opportunities for altering the balance of stresses and supports so as to improve outcomes.⁹ Cicchetti uses organizational and dialectical theories of development to propose that during a developmental transition, when new cognitive, social, and emotional capacities are being introduced, the configuration and organization of new developmental capacities are especially responsive to the introduction of more favorable developmental circumstances.¹⁰ Intervention programs can then be designed that leverage the normally occurring developmental shifts to enhance the use of existing resources in new ways as well as to enhance the emergence of new capacities.

Implications for Latino Families

Although much of the social developmental literature cited has not focused specifically on Latino families, Latino researchers and practitioners working in the areas of prevention and public policy have found ecological, social developmental, and family systems developmental perspectives especially compatible with the characteristics and needs of Latinos. The nested structures of an ecological approach, which views individual development as affected by family, schools, community, and cultural context, have been found useful in work with Latinos that studies, for example, the school, family, and peer configuration which contributes to Latino high school students' successful graduation,¹¹ approaches Latino substance abuse prevention and treatment in family and cultural context,¹² or addresses adolescent delinquency prevention from the perspective of individual, family, and cultural factors.¹³

In expanding the usefulness of a social developmental model for problem prevention approaches with Latino families, it is important to address the cultural limitations of the social developmental approaches. First of all, most of these models take dominant North American assumptions from individual development and broaden them to include social factors but without questioning the assumptions of the basic model. For example, Erikson's model of identity development, which emphasizes the development of a distinctive, autonomous private self, continues to be the base of comparison as a milestone for adolescent outcome, in spite of substantive feminist and cultural critiques. Further, the strong emphasis on outcome measures that celebrate social adaptation assumes that successful development involves a good capacity for conformity to a social environment and bypasses the possibility of a cultural critique. The emphasis on resilient development in the face of adversity implies that the individual rather than an unjust social environment is ultimately responsible for personal failure and success. Finally, the field shows considerable slippage between approaches that emphasize the creative developmental aims of even severe symptomatology and approaches that emphasize a psychopathology perspective. Latino families in the United States are especially vulnerable to prevention approaches that take a North American developmental model as its outcome measure, assuming that deviation from these norms immediately places families at risk for psychopathology and perhaps compulsory intervention.

A social developmental model that does justice to the complexity of Latino families needs to recognize that opportunities for optimal development are not created equal and that many children in Latino families grow up exposed to systematic risks such as poverty, community violence, deficient urban schools, limited access to health and mental health care, and racism. They are also likely to face a great deal of conflict in their attempts to stay loyal to Latino family, community, and culture of origin while growing up in a culture and receiving education in schools that celebrate the limitations of a monolingual English society and diminish the value of bilingual and bicultural competence. Their parents are likely to experience job discrimination, to receive less pay for equal work, and to face teachers and providers who don't understand their culture and language when seeking services for themselves and their children.

Yet an increasing number of writers are arguing that deficit models are themselves potentially racist and destructive in their failure to acknowledge the resourcefulness of Latino children and families as well as other families of color in creatively negotiating the painful cultural conflicts generated by growing up in a racist society.¹⁴ In fact, a conceptual overview and summary of characteristics common to successful ethnically

diverse youth and families features qualities encouraged by Latino families such as a sense of responsibility for others, affectional ties with alternative caregivers, involvement in sibling caregiving and other “required helpfulness” or assignment of family responsibilities, and spiritual or religious faith.¹⁵

The fact that systematic social injustice, rather than a risky configuration of stresses as compared to resources, is part of the ecology of human development for Latino children and families in the United States needs to be acknowledged and systematically addressed in public policy efforts that apply social developmental models to problem prevention for Latinos. Garbarino and his colleagues offer an example of how an ecological perspective, when informed by a critical cultural point of view, can illuminate important areas of intervention that include individuals, families, community institutions, and cultural attitudes.¹⁶ In discussing the public health epidemic of violence in poor urban communities of color, Garbarino notes that cultural attitudes need to be transformed in the same way that public attitudes shifted to recognize the value of car seats in lowering the incidence of child deaths in automobile accidents. Whereas the death of unrestrained children in car accidents was at one time considered an inevitable reality, the public has come to view enforcing the use of car seats for young children as a basic parental and community responsibility.

Substantial social barriers will have to be overcome in shifting public attitudes toward the public health epidemics of poverty and violence among children in urban communities of color. Schorr,¹⁷ in her review of successful programs with poor families, notes that this country’s “war on poverty” has shown strong commitment to eradicating poverty among the elderly while permitting the number of children who grow up in poverty to become ever greater. She observes that programs to assist the aged are politically more successful than programs for children, partly because it is almost impossible to help poor children without helping their families. Yet this public image that public assistance to young families cultivates “dependency” and irresponsibility is not borne out by careful study of existing programs.

Both Garbarino and Schorr assert the importance of action to shift public attitudes toward family policy as a means of mobilizing the wider society’s commitment to protecting the development of millions of children growing up in poverty. McLoyd carefully reviews the literature on the impact of economic hardship on child development and suggests that levels of parental distress are a crucial mediating process by which poverty translates into at-risk child outcomes.¹⁸ Shifts in public recognition of social problems may also help relieve the psychological burden on children and families in poor and ethnically diverse communities who are encouraged to believe that personal failures account for their arduous lives and adverse developmental circumstances. Even in vulnerable communities whose resourcefulness has been degraded by poverty, violence, and substance abuse, where individuals use up a heroic amount of energy surviving adverse circumstances, a shared recognition that these problems are due to unjust social practices rather than individual defect liberates the energy that can be used to address these conditions at both a personal and community level.

Family Development in Social Context: A Critical Cultural Perspective

An integrative family developmental model can help bring together social developmental and critical cultural perspectives in providing a coherent conceptual model that can

inform prevention and early intervention efforts on behalf of Latino families. My model of family development can guide prevention and intervention efforts that enhance resources and minimize risks, permitting children and families to use their considerable capacities toward more positive developmental outcomes of their own design.¹⁹

This model is quite compatible with the world view of many Latino families, beginning with the assumption that human development is a collaboration among individuals, families, communities, and cultures rather than a quality of the isolated individual.

The intergenerational family life cycle in cultural and historical context becomes the most effective means of understanding a process of change that is propelled by simultaneous, interrelated changes owing to the following:

1. The movement of each individual, adult and child, through his or her unique life cycle;
2. The interaction of these individual life cycles at a given moment of the family history;
3. The developmental motion of this interacting family organization over the course of the family life cycle;
4. The interweaving of intergenerational life cycles, since the young parent in a family of procreation is at the same time an offspring in a maturing family of origin;
5. The movement of a family through the course of historical time in its sociocultural location.

Throughout the family life cycle, individuals creatively reorganize experience with new developmental tools under changing life circumstances in collaboration with close others. This shared development requires a negotiated, mutually inclusive balance between self-assertion and harmonious connection among family members so that changes can be integrated into an increasingly complex organization of self with others. However, the management of discontinuity in the growth of a complex, collaborative self requires a supportive balance of continuity and stability. In the absence of realistic supports and social resources, individuals and families respond to change with responses designed to control a conflictual or overwhelming new situation.

The more severe the stresses and discontinuities accompanying a developmental transition, and the more limited the sources of support, the more severe the defensive strategies that restore a sense of stability. Yet these defensive strategies often represent an individual's and family's best attempt at stabilization and adaptation to changing developmental circumstances. Parenting, the crucial relationship that links adult development and child growth, requires enormous sensitivity and flexibility on the part of an adult who is dealing with other life demands while responding to the shifting needs of developing children. At the same time, parenting is highly sensitive to the available stresses and supports in an adult's environment, especially under circumstances of cultural change.

Healthy family relationships are characterized by an authoritative parental stance that combines warmth and support with structure and discipline. Either overly authoritarian and controlling or overly permissive and passive, parenting styles are more likely to lead to child and family symptomatology. Parents are more likely to lose a balanced perspective in relating to their children if they themselves face overwhelming stresses and

lack sufficient supports. Extended family relationships can serve as important resources for children and parents, although these relationships can also be sources of conflict, especially in communities which cannot offer to adults enough support so that they can act generously toward others.

The process of family development takes place within, and is organized by, the socio-cultural context within which family relationships are embedded. In culturally constructing the collaborative self over the course of the family life cycle, every culture creates its own configurations, which take into account age, gender, and social role, in the balance of self-assertion and connection for its members. Culturally determined power asymmetries, such as racism or sexism, give members of a dominant group the power to define the less powerful person's reality so as to regulate and enhance the dominant group's sense of self at the expense of less powerful others. Under conditions of social injustice, a culture accepts the dominant group's negative attributions of the less powerful group. As in family abuses of power, cultural abuses of power interfere with the enhancement of all members through flexible collaboration and mutual adaptation.

Implications for Latino Families

For Latino families in the United States, the process of family development is made more complex and potentially more stressful by the intergenerational dislocations, multiple cultural experiences, and loyalties that characterize the lives of our bicultural and multicultural families. The moment in the intergenerational life cycle when immigration or migration took place, the family's immigration history in its sociopolitical context, and the cultural mix in the community where the family resides are only some of the factors that contribute to a particular family's unique configuration of experiences and meanings which add up to a shared, complex sense of self. Latino families negotiate the ordinary changes of the family life cycle along with many additional stresses of economic hardship, cultural dislocation, and discontinuity. At the same time, the challenge of collaboratively integrating a complex, culturally diverse life experience can lead to creative adaptive strategies featuring a more perspectivistic or complex view of self and others.²⁰ A family developmental approach that emphasizes the social and cultural context of individual development holds a great deal of promise for enhancing the development of Latino families using a multidimensional contextual model that can recognize the resources of these adolescents and their families without minimizing the social strains which growing up in a racist society impose.

In the following section, the usefulness of the family developmental approach for working with Latino families to enhance developmental outcomes is explored by discussing programs that target transition to parenthood and early family development. Prevention programs frequently select early infancy as the crucial opportunity for enhancing a child's developmental foundation. The discussion focuses on selected programs designed for work with Latino children and families that make use of a culturally based family approach, directly addressing issues of cultural diversity, complexity, and social oppression as part of their intervention efforts.

Early Intervention in Family Development: Transition to Parenthood and Early Infant Development

In identifying moments of entry for early intervention services that support the develop-

ment of infants and families, many writers note the importance of the pregnancy and early postpartum phase of infant development as moments when the foundation for neurodevelopmental resources are established.²¹ The high rates of infant mortality among ethnic minority families living in urban poverty, which have been documented as unacceptably high, are frequently referred to as an overall index of a community's general health and well-being.²² Infant mortality figures allude to the large numbers of surviving infants whose lives are saved but whose neurological development may be compromised. Further, the conditions of growing up in poverty add significantly to the risk that a premature or low-birth-weight infant will show developmental delays at one year follow-up.²³

While divided on issues of theoretical orientation and method of service delivery, the early intervention literature consistently asserts that multiple biological, familial, and social factors, including maternal and child physical health, quality of mother-infant relationship, quality of supportive relationships, and other resources available to the mother, interact in complex ways to determine the quality of infant and early childhood developmental outcomes.²⁴ This finding is consistent with the developmental risk and resilience literature, which finds that while many aspects of development are relatively resilient in the face of adversity, the piling on of multiple risks, especially those associated with growing up in poor, single-mother families, make it that much more difficult for children to grow up without adverse developmental consequences.²⁵ Because of the number of Latino infants born under circumstances of developmental risk, marked by high rates of infant mortality in the context of family poverty, many Latino infants would be candidates for early intervention services designed to stimulate infant development and enhance the parent's role in improving the conditions for the infant's development. Yet Latino families also present a challenge to early intervention programs, which need to take into account special cultural and family structural characteristics that profoundly affect the utility of such programs for Latino families. First of all, Latino families hold different beliefs about the qualities of infant development mothers should encourage, and they orient their child-rearing practices toward these goals.²⁶ These goals for child development, in turn, are associated with the culturally valued qualities encouraged among adult members of a cultural community. Ogbu²⁷ further notes that different characteristics and competencies, and corresponding child-rearing techniques, are encouraged and valued among ethnic minority groups in the United States whose lives are profoundly affected by poverty and racism. In a review of research associated with ethnic minority differences in infant development, Garcia Coll found that Latina mothers differed in their stated goals for child rearing and were more likely to emphasize maternal action such as protectiveness and responsiveness, which would foster the value of interdependence.²⁸ She also noted that within Latino families of similar low socioeconomic background, mothers differed in these child-rearing goals and maternal action, so that, for example, Puerto Rican mothers talked less to their infants but played more social games and showed more contingent responsivity to the infant's actions when compared with Cuban mothers, who talked the most to their infants and played more teaching games.²⁹

Although cultural differences in early infant care are substantial, they are perhaps easier to handle than cultural differences in the care of older infants, once issues of parental discipline style and issues related to cognitive and language stimulation and education are also introduced. Culturally competent early intervention services for Latino families need to begin with the realization that cultural values affect basic characteristics of mother-infant interaction and that intervention services must respectfully

include a mother's own perspective on her maternal competencies and goals. As part of a needs assessment for parental support services conducted for the Healthy Boston Jamaica Plain coalition,³⁰ focus groups were conducted with Latina mothers on their needs as mothers in this community. The mothers asserted that although they very much wanted to use the resources of professional health and mental health providers in supporting their parenting, they were highly suspicious of Anglo professionals who wanted to interfere with their own best knowledge of culturally based values and child-rearing practices. They described ideal family support services as taking place in the context of a child and family activities center, which would give priority to shared social and educational activities they were too poor and overworked to seek out and provide for themselves. Within a positive, family-affirming context, they would find it useful to consult with child development or mental health professionals, assuming that they offered their expertise with respect and appreciation of their culturally based capacities as Latina mothers. Although methods of discipline may cause the most difficulties in offering family support services because of the risk of Department of Social Services interference, professional prejudices concerning lack of parental involvement in children's early home-based education and cognitive stimulation, or prejudices against simultaneous Spanish and English language acquisition, are other examples of culturally based failures of communication between Latino families and service providers.

The lack of Latino providers at every level of health care, including basic prenatal care as well as early intervention programming, constitutes a significant barrier to Latino family access to these services. Prenatal care for Latina mothers frequently has to address differences in language, in dietary habits, and in health care beliefs. Many Latina mothers are relatively young or have limited education, and they typically rely on support from an extended family who represent important resources and need to be enlisted in collaboration with health services and early intervention providers. Additionally, substance abuse has become an increasingly important factor among the most at-risk Latina mothers, and the limited available substance abuse services for pregnant women are even less frequently available for Latinas.

In spite of these barriers, Latina mothers and their families show special strengths and culturally based values that make pregnancy and the transition to parenthood an especially accessible developmental opportunity for prevention and early intervention on behalf of enhancing both maternal and infant health. First of all, motherhood is viewed as an important, meaningful, and respected role, more so than in Anglo families in which women receive conflicting messages about the greater value of paid work outside the home as compared with unpaid child care. Although the Latino culture's gender roles may over-emphasize a mother's obligations to placing parenting and family over personal concerns, mothers can easily use the culturally congruent belief in family interdependence to understand that if they don't take care of themselves in basic ways, they are in no position to take care of their children. This high involvement with child care, and culturally based recognition of interdependence, can be used to motivate mothers to promote aspects of their own development that are necessary for the development of their children.

Culturally Based Early Intervention Services for Latina Mothers of Young Children

The Avance (Spanish for "advance" or "move forward") parent education program in San Antonio, Texas, and the Projecto Mama/Moms project at Boston's City Hospital

offer to mothers of young children culturally sensitive support services that mobilize the multiple ecologies of early family development. The Avance Family Support and Education program was started in Dallas in the early 1970s by students of Bronfenbrenner's ecology of human development program, and continued in San Antonio as a community-based parental support organization.³¹ Rodriguez describes her experience as a teacher of Latino children who were failing school in the early grades because of lack of family support and collaboration between schools, the family, and the wider community. In conducting a needs assessment among parents of these children, she realized that the parents overidealized the role of the schoolteacher as the first educator for their children and did not appreciate the importance of their own role as the child's first educator. Noting that all these parents were highly motivated to have their children succeed in school, she began a program that highlighted the role of parents as children's first teachers.

Rodriguez founded Avance as a community-based resource center for families to help parents better understand the important role they played in their children's education prior to age three and to provide them with the supports they needed to become more effective parents. Initially, the program focused on a nine-month comprehensive parenting and family support program that emphasized the parental role in promoting young children's ongoing development. Mothers attend a center-based program that meets once a week for three hours, nine months each year, and they are visited monthly in their homes. Videotapes are made of these visits and are later brought into classes for discussion of the mother's and child's interactions.

The program's intensive education focused on mothers, but then used these initial relationships to involve fathers as well, whenever possible. Day care services were provided as part of the parent education program, and mothers participated in a day care collaborative that also served as a practicum in early child development.

In addition to the structured aspect of the educational programs, Avance functions as a resource identification, parent advocacy, and community resource development agent. Avance helps parents learn to use essential and at times underutilized social, educational, economic, health, mental health, and housing services through referrals and weekly guest speakers from community agencies. To supplement the parallel educational programs for mothers and their children, Avance offers joint group activities, which include field trips for groups of mothers and children and monthly trips to the library. The program is designed to enhance the mother's respect and appreciation for her own role as a mother and to enlist other mothers in the program as sources of support.

Evaluations of the program have shown extremely impressive short-term effects as well as long-term benefits on seventeen-year follow-up, not only in terms of the initial goal of improving child school outcomes, but also in improving the quality of life for the mothers. In 1973, when the program began, 91 percent of the mothers had dropped out of school. In 1991, program evaluation showed that 94 percent of the children who attended Avance had either completed high school, received a general equivalency diploma (GED), or were still attending high school. Forty-three percent of the children who graduated were attending college; 57 percent of mothers who had dropped out returned to complete the GED; and 64 percent of mothers had attended college or a technical program. The program was shown to affect maternal attitudes and behaviors, with an increased sense of personal efficacy, greater positive interactions with their children, and increased use of community resources.

Expansions of the program have included the addition of adult literacy and economic development components and intensive support services for families identified as abusive by the Department of Social Services. Avance, which has achieved substantial national recognition as a model program, currently serves 4,500 individuals in seven community centers and ten schools in San Antonio and Houston, Texas.

Projecto Mama/Moms Project also uses a culturally sensitive, community-based outreach model for early intervention, seeking to involve addicted women in a program designed to reduce drug use during pregnancy and support the process of recovery from addiction so as to improve health and psychological outcomes for both women and their children.³² Projecto Mama appeals to cultural values that highly regard family, motherhood, and the welfare of children as the initial connection to draw into the program women who might not otherwise seek treatment for substance abuse.

The philosophy that underlies the program is one of empowerment and participatory education informed by culturally sensitive feminist approaches to women's development³³ and Freire's concepts of participatory education.³⁴ The program addresses institutional and cultural barriers to substance abuse services for women, including lack of substance abuse treatment appropriate for pregnant women, lack of child care, fragmentation of services, and lack of culturally and linguistically appropriate substance abuse and prenatal care services, and racism or insensitivity on the part of providers. In addition, psychosocial barriers to substance abuse services for this population include marginalization and alienation of substance abusing women, judgmental and shaming attitudes on the part of practitioners, and a substance abusing mother's well-founded fear of losing her children if she admits substance abuse to a provider.

Projecto Mama sees the pregnancy postpartum experience as a crucial "window of opportunity" motivating a substance abusing mother to seek treatment on behalf of her child's health. The integration of a Freirean and a culturally sensitive feminist approach emphasizes respectful, collaborative treatment efforts that recognize the life conditions of poverty, discrimination, and physical or sexual abuse associated with substance abuse among Latinas. Staff were carefully selected to appreciate the cultural and community base of the mothers' experiences, and were, when possible, Latinas from the same community. A combination of staff resources was needed, so that the working team included outreach educators, a nurse, a social worker/counselor, a parenting specialist, a receptionist, an obstetrician/gynecologist, and a program manager.

The program engaged the women by first addressing immediate survival needs as they defined them, which included lack of food and shelter, experiences of abuse and violence, health problems, legal problems, child custody problems, and many others. Addiction and related problems were addressed only after a woman's situation of crisis was stabilized. This collaborative approach to problem definition, which reassured the women that their needs and views would be respected, went a long way in establishing trust in the program and empowering women to face and cope with their substance abuse.

The intervention involves a system of comprehensive and coordinated services comprised of community outreach; case management, referral, and advocacy; health education and recovery support groups; parenting skills enhancement; and other support ser-

vices such as transportation, child care, food, and clothing. All aspects of the program were tailored to the specific needs and characteristics of Latinas. For example, street outreach in the community needed to address the fact that Latinas did not tend to be involved in street drug trade and could be more easily reached through patient participation in neighborhood locales such as businesses and bodegas, which functioned as socializing centers. The absence of formal support services in this community was balanced by the presence of culturally based informal support networks, so that work with local business leaders, local radio stations, and word of mouth became key sources for getting the word out to the community about the program.

Coordinated, integrated services required an intensive intake procedure, which emphasized client self-assessment and self-awareness as well as provider information. Special attention was given to social network assessment tools such as a genogram and an eco-map, which look both at extended family and at wider formal and informal community resource people in a woman's life. These tools were used to assess which relationships were potential sources of help and which were draining or sources of conflict. The intensive intake process helped clarify for both the participant and the staff which of the treatment modalities would best suit her particular combination of needs and resources.

Careful case management and advocacy work is especially important for Latinas, since few of the readily available services are linguistically and culturally appropriate. The women were encouraged to become advocates for themselves, through role-playing and didactic sessions that prepared them for meetings with service providers and to bring their own sense of coherence to fragmented services with multiple providers.

Health education was accomplished through health circles based on the emancipatory pedagogy of Freire,³⁵ which encourages an individual's increased control over his or her own health and health care through identification of social problems and participation in personal and social changes. The women participated in health circles by defining their own problem areas of interest and building their own curriculum, using staff as resources and colearners rather than "experts." Parenting support services addressed effective modes of discipline as alternatives to physical violence and were congruent with cultural values and expectations.

Close attention was also paid to essential support services, such as transportation and child care, which can present barriers to participation. Contrary to substance abuse approaches that consider support services as preventing a substance abusing mother from "hitting bottom" and facing her drug use, this approach recognizes that the vast majority of participants are severely deprived financially and emotionally while trying to care for children. Support services help stabilize a woman's situation and create a safety zone within which she may begin to address her own drug treatment and mental health needs.

Avance and Projecto Mama are successful programs for Latina mothers during the early years of maternal and child development which show the effectiveness of culturally sensitive services designed to enhance developmental outcomes. Avance explicitly used Bronfenbrenner's ecological model to frame its levels of intervention, while Projecto Mama emphasized critical cultural and empowerment approaches that challenged the social status quo more strongly.

Both programs rejected a defect or deficit model and emphasized the personal and

cultural resources of Latinas as mothers while addressing the many social stresses that are part of these women's lives as they struggle to be successful mothers. Both programs agreed that the best means for improving child outcomes first address maternal development, since from a family developmental perspective the enhancement of a woman's own growth enables her to provide the best environment for her child's growth. Both programs recognize that Latina mothers bear primary responsibility for children with limited sources of support and help women to identify resources in their own lives, including fathers or partners, extended family, other mothers in the community and in the programs, and informal helpers as well as formal support providers. Consistent with a family developmental model, these programs assert that women can themselves learn to evaluate and improve the resources available to support their own and their children's development.

In sum, a social developmental approach combined with a critical cultural perspective is offered as an integrative framework for providing prevention and early intervention services to Latino families. This article used the family life cycle stage of transition to parenthood and infant development to illustrate the utility of the social developmental model for services to Latino families. However, this model is also useful in designing programs that promote family development during other stages of the family life cycle for Latino families, including adolescent development and family bereavement.³⁶

Such an approach suggests that public policy approaches addressing the needs of Latino families and improving family developmental outcomes will themselves need to function at multiple levels. Not only will we need to design programs that address the needs of Latino families in culturally sensitive, respectful, and collaborative ways, but we will also need to intervene in social attitudes and institutional practices which contribute to the developmental burdens carried by Latino families. Yet the social developmental programs described here illustrate the enormous resourcefulness of even the most vulnerable Latino families when their own cultural and collective strengths are mobilized on behalf of their own development. ■

Notes

1. H. Amaro, "Projecto Mama/Project Mom: A Program for Substance Abuse Services and HIV Prevention with Latina Mothers," paper presented at a conference, Issues in Latino Mental Health, Boston City Hospital Multicultural Training Program in Psychology, Boston, 1992; H. Amaro and M. Aguiar, "Projecto Mama/Moms Project: A Community-Based Outreach Model for Addicted Women," in J. Szapocznik, ed., *A Hispanic/Latino Family Approach to Substance Abuse Prevention*, Center for Substance Abuse Prevention Cultural Competence Series #2 (Rockville, Md.: National Clearinghouse for Alcohol and Drug Information, 1994), 125-149; J. Sorensen and G. Bernal, *A Family Like Yours: Breaking the Patterns of Drug Abuse* (San Francisco: Harper and Row, 1987); C. Falicov, *Cultural Perspectives in Family Therapy* (Rockville, Md.: Aspyn Systems Press, 1983); C. Falicov, *Family Transitions: Continuity and Change over the Life Cycle* (New York: Guilford Press, 1988); C. Falicov, "Learning to Think Culturally in Family Therapy Training," in H. Liddle, D. Breunlin, and R. Schwartz, eds., *Family Therapy Training: Recent Trends, Perspectives, and Developments* (New York: Guilford Press, 1989); C. Falicov, "Thinking Culturally in Family Therapy," paper presented at the annual meeting of the American Family Therapy Academy, Baltimore, 1994; C. Garcia Coll, "Developmental Outcome of Minority Infants: A Process-oriented Look into Our Beginnings," *Child Development* 61, no. 2 (1990): 270-289; C. Garcia Coll, "Development of Latino

- Infants and Families," paper presented at a conference, Issues in Latino Mental Health, Boston City Hospital Multi-Cultural Training Program in Psychology, 1992; C. Garcia Coll and E. Meyer, "The Sociocultural Context of Infant Development," in C. Zeanah, ed., *Handbook of Infant Mental Health* (New York: Guilford, 1993), 56–69; J. Szapocznik and W. Kurtines, "Family Psychology and Cultural Diversity: Opportunities for Theory, Research and Application," *American Psychologist* 48, no. 4 (1993): 400–407; J. Szapocznik, W. Kurtines, D. Santisteban, and A. Rio, "Interplay of Advances between Theory, Research and Application in Treatment Interventions Aimed at Behavior Problem Children and Adolescents," *Journal of Consulting and Clinical Psychology* 58, no. 6 (1993): 696–703; J. Szapocznik, A. Ceballos, M. Scopetta, H. Pantin, D. Santisteban, and M. Elias, "Shenandoah: A School-based Intervention," in Szapocznik, *A Hispanic/Latino Family Approach to Substance Abuse Prevention*, 171–204.
2. E. Shapiro, "Individual Change and Family Development: Individuation as a Family Process," in C. Falicov, ed., *Family Transitions* (New York: Guilford Press, 1988); E. Shapiro, "Human Development and Social Injustice: Implications for Therapy with Latino Children and Families," paper presented at a conference, Issues in Latino Mental Health, Boston City Hospital Multicultural Training Program in Psychology, Boston, 1993; E. Shapiro, *Grief as a Family Process: A Developmental Approach to Clinical Practice* (New York: Guilford Press, 1994); E. Shapiro, "Mauricio Gastón Institute ROCA High Risk Youth Substance Abuse Early Intervention Project Process Evaluation, 1993–1994," Boston, 1994; E. Shapiro, "Grief as a Family Process: Learning from Latino Families," paper presented at Mauricio Gastón Institute for Latino Research, Public Policy and Community Development, Boston, 1995.
 3. J. Belsky, "Lessons from Child Abuse: The Determinants of Parenting," in D. Cicchetti, D. and V. Carlson, eds., *Child Maltreatment: Theory and Research on the Causes and Consequences of Child Abuse and Neglect* (Cambridge: Cambridge University Press, 1989), 153–202. J. Belsky, "Etiology of Child Maltreatment: A Developmental-Ecological Analysis," *Psychological Bulletin* 114, no. 3 (1993): 413–434. U. Bronfenbrenner, *The Ecology of Human Development: Experiments by Nature and Design* (Cambridge, Mass.: Harvard University Press, 1979). U. Bronfenbrenner, P. Moen, and J. Garbarino, "Families and Communities," in H. Parke, ed., *Review of Child Development Research* (Chicago: University of Chicago Press, 1984), 251–278. J. Garbarino, "The Human Ecology of Early Risk," in S. Meisels and J. Shonkoff, eds., *Handbook of Early Childhood Intervention* (Cambridge: Cambridge University Press, 1990), 79–86; J. Garbarino, N. Dubrow, K. Kostelny, and C. Pardo, *Children in Danger: Coping with the Consequences of Community Violence* (San Francisco: Jossey Bass, 1992); A. Pence, ed., *Ecological Research with Children and Families: From Concepts to Methodology* (New York: Columbia University/Teachers Garcia College Press, 1988); H. Weiss and F. Jacobs, *Evaluating Family Programs* (New York: Aldyne de Gruyter, 1988).
 4. D. Cicchetti, "How Research on Child Maltreatment Has Informed the Study of Child Development: Perspectives from Developmental Psychopathology," in Cicchetti and Carlson, *Child Maltreatment*; D. Cicchetti and N. Garmezy, eds., *Milestones in the Development of Resilience, Special Issue, Development and Psychopathology* 5, no. 4 (1993): 497–775; J. Coie, N. Watt, S. West, J. Hawkins, J. Asarnow, H. Markman, S. Ramey, M. Shure, and B. Long, "The Science of Prevention: A Conceptual Framework and Some Directions for a National Research Program," *American Psychologist* 48, no. 10 (1993): 1013–1022. N. Garmezy, "Stress, Competence and Development: Continuities in the Study of Schizophrenic Adults, Children Vulnerable to Psychopathology, and the Search for Stress-Resistant Children," *American Journal of Orthopsychiatry* 57 (1987): 159–185. S. Gore and J. Eckenrode, "Context and Process in Research on Risk and Resilience," in R. Hagery, N. Garmezy, M. Rutter, and L. Sherrod, eds., *Stress, Risk and Resilience in Children and Adolescents: Processes, Mechanisms and Interventions* (Cambridge: Cambridge University Press, 1994), 19–63; A. Masten, K. Best, and N.

- Garmezy, "Resilience and Development: Contributions from the Study of Children Who Overcome Adversity," *Development and Psychopathology* 2 (1991): 425-444; J. Rolf, A. Masten, D. Cicchetti, K. Nuechterlein, and S. Weintraub, *Risk and Protective Factors in the Development of Psychopathology* (Cambridge: Cambridge University Press, 1990); E. Werner, "Protective Factors and Individual Resilience," in Meisels and Shonkoff, *Handbook of Early Childhood Intervention*, 97-115; E. Werner, "Risk, Resilience and Recovery: Perspectives from the Kuai Longitudinal Study," *Development and Psychopathology* 5, no. 4 (1993): 503-516.
5. I. Bretherton and E. Waters, *Growing Points in Attachment Theory and Research*, Monographs of the Society for Research in Child Development 50, nos. 1-2, Serial #209 (1985), and C. Parkes, J. Stevenson-Hinde, and P. Marris, eds., *Attachment Across the Life Cycle* (London: Routledge, 1991).
6. G. Bernal and A. Alvarez, "Culture and Class in the Study of the Family," in Falicov, *Cultural Perspectives in Family Therapy*; Falicov, *Cultural Perspectives*; Falicov, *Family Transitions*; Falicov, "Learning to Think Culturally"; Szapocznik and Kurtines, "Family Psychology and Cultural Diversity," 400-407; Szapocznik et al., "Interplay of Advances," 696-703.
7. Garcia Coll, "Minority Infants," 270-289; Garcia Coll and Meyer, "Sociocultural Context," 56-69; Meisels and Shonkoff, *Handbook of Early Childhood Intervention*; C. Lyons-Ruth and C. Zeanah, "The Family Context of Infant Mental Health: I. Affective Development in the Primary Caregiving Relationship," in C. Zeanah, ed., *Handbook of Infant Mental Health* (New York: Guilford Press, 1993), 14-37; A. Sameroff and R. Emde, *Relational Disturbances in Early Childhood* (New York: Basic Books, 1989); H. Yoshikawa, "Prevention as Cumulative Protection: Effects of Early Family Support and Education on Chronic Delinquency and Its Risks," *Psychological Bulletin* 155, no. 1 (1994): 28-54.
8. Coie et al., "Science of Prevention," 1013-1022.
9. Garbarino, "Ecology of Early Risk," 79-86; Garbarino et al., *Children in Danger*; M. Rutter and N. Garmezy, "Developmental Psychopathology," in P. Mussen, ed., *Handbook of Child Psychology*, vol. 4 (New York: Wiley, 1983), 775-911; Shapiro, *Grief as a Family Process*; C. Upshur, "Early Intervention as Preventive Intervention," in Meisels and Shonkoff, *Handbook of Early Childhood Intervention*, 633-650; R. Winett, A. King, and D. Altman, *Health Psychology and Public Health: An Integrative Approach* (Boston: Allyn and Bacon, 1994).
10. Cicchetti, "Child Maltreatment," 377-430.
11. R. Fernandez and W. Velez, "Who Stays? Who Leaves? Findings from the Aspira Five Cities High School Dropout Study," *Latino Studies Journal*, 1990, 59-77; C. Turner, A. Laria, E. Shapiro, and C. Perez, "Poverty, Resilience, and Academic Achievement among Latino Garcia College Students and High School Dropouts," in R. Rivera and S. Nieto, eds., *The Education of Latino Students in Massachusetts: Issues, Research, and Policy Implications* (Amherst: University of Massachusetts Press, 1994), 191-216.
12. Amaro, "Projecto Mama," 125-149; G. Rodriguez, "The Avance Family Support and Education Program: Strengthening Families in the Pre-school years," in Szapocznik, *A Hispanic/Latino Family Approach to Substance Abuse Prevention*, 155-170; J. Sorensen and G. Bernal, *A Family Like Yours* (New York: Harper and Row, 1987); Szapocznik, *Hispanic Substance Abuse Prevention*.
13. Szapocznik et al., "Behavior Problem Children," 696-703; J. Richters and P. Martinez, "Violent Communities, Family Choices, and Children's Chances: An Algorithm for Improving the Odds," *Development and Psychopathology* 5, no. 4 (1993): 609-628.

14. N. Boyd-Franklin, *Black Families in Therapy: A Multi-Systems Approach* (New York: Guilford Press, 1989); I. Canino and J. Spurlock, *Culturally Diverse Children and Adolescents: Assessment, Diagnosis, and Treatment* (New York: Guilford Press, 1994); A. Darder, *Culture and Power in the Classroom: A Critical Foundation for Bicultural Education* (New York: Bergin and Garvey, 1991); M. Fine, *Disruptive Voices: The Possibility of Feminist Research* (Ann Arbor: University of Michigan Press, 1992); M. Fine, *Framing Dropouts: Notes on the Politics of an Urban High School* (Ann Arbor: University of Michigan Press, 1991); Garbarino, "The Human Ecology of Early Risk," 79–86; Garbarino et al., *Children in Danger*; Garcia Coll, "Minority Infants," 270–289; Garcia Coll, "Development of Latino Infants"; Garcia Coll and Meyer, "Sociocultural Context," 56–69; J. Helms, *Black and White Racial Identity: Theory, Research and Practice* (New York: Greenwood Press, 1990); T. LeFramboise, H. Coleman, and J. Gerton, "Psycho-logical Impact of Biculturalism: Evidence and Theory," *Psychological Bulletin* 114, no. 3(1993): 395–412; S. Nieto, *Affirming Diversity: The Sociopolitical Context of Multicultural Education* (New York: Longman, 1992); J. Phinney, "Ethnic Identity in Adolescents and Adults: Review of Research," *Psychological Bulletin* 108, no. 3 (1990): 499–514; E. Pinderhughes, *Understanding Race, Ethnicity and Power* (New York: Free Press, 1989); M. Seedat and V. Nell, "Third World or One World: Mysticism, Pragmatism and Pain in Family Therapy in South Africa," *South African Journal of Psychology* 20, no. 3 (1990): 141–149; Shapiro, "Development and Injustice"; Shapiro, *Grief as a Family Process*; D. Taylor and C. Dorsey-Gaines, *Growing Up Literate: Learning from Inner-City Families* (Portsmouth, N.H.: Heinnean, 1988); Turner et al., "Latino Students," 191–216; F. Tyler, D. Brome, and J. Williams, *Ethnic Validity, Ecology, and Psychotherapy* (New York: Plenum, 1991); L. Vargas and J. Koss-Chioino, *Working with Culture: Psychotherapeutic Interventions with Ethnic Minority Children and Adolescents* (San Francisco: Jossey Bass, 1992); K. Walsh, *Pedagogy and the Struggle for Voice: Issues of Language, Power and Schooling for Puerto Ricans* (New York: Bergin and Garvey, 1991).
15. Werner, "Protective Factors," 97–115; Werner, "Risk, Resilience and Recovery," 503–516.
16. Garbarino, "Ecology of Early Risk," 79–86; Garbarino et al., *Children in Danger*.
17. L. Schorr and D. Schorr, *Within Our Reach: Breaking the Cycle of Poverty* (New York: Doubleday, 1988).
18. V. McLoyd, "The Impact of Economic Hardship on Black Families and Children: Psychological Distress, Parenting, and Socioemotional Development," *Child Development* 61, no. 2 (1990): 311–346.
19. Shapiro, "Individual Change and Family Development," 159–180; Shapiro, *Grief as a Family Process*.
20. A. Harrison, M. Wilson, C. Pine, S. Chan, and R. Buriel, "Family Ecologies of Ethnic Minority Children," *Child Development* 61, no. 2 (1990): 347–362; J. Gutierrez and A. Sameroff, "Determinants of Complexity in Mexican-American and Anglo-American Mothers' Conceptions of Child Development," *Child Development* 61, no. 2 (1990): 384–394.
21. Garcia Coll and Meyer, "Sociocultural Context," 56–69; Meisels and Shonkoff, *Handbook of Early Childhood Intervention*; Schorr and Schorr, *Within Our Reach*; Upshur, "Early Intervention," 633–650.
22. C. Hertzman, "The Lifelong Impact of Childhood Experiences: A Population Health Perspective," *Daedalus* 123, no. 4 (1994): 167–180; N. Miyaji and M. Lock, "Monitoring Motherhood: Sociocultural and Historical Aspects of Maternal and Child Health in Japan," *Daedalus* 123, no. 4 (1994): 87–112.

23. Garcia Coll and Meyer, "Sociocultural Context," 56–69; Hertzman, "Lifelong Impact of Childhood," 167–180; R. Halpern, "Poverty and Infant Development," in Zeanah, *Handbook of Infant Mental Health*, 73–86.
24. Garcia Coll "Minority Infants," 270–289; Meisels and Shonkoff, *Handbook of Early Child Intervention*; Zeanah, *Handbook of Infant Mental Health*.
25. Halpern, "Poverty and Infant Development," 73–86; B. Egeland, E. Carlson, and A. Sroufe, "Resilience as Process," *Development and Psychopathology* 5, no. 4, 517–528.
26. Garcia Coll, "Minority Infants," 270–289; Garcia Coll and Meyer, "Sociocultural Context," 56–69.
27. J. Ogbu, "Origins of Human Competence: A Cultural-Ecological Perspective," *Child Development* 52: 413–429.
28. Garcia Coll, "Minority Infants," 270–289; Garcia Coll, "Latino Children and Families."
29. T. Field and S. Widmeyer, "Mother-Infant Interactions among Lower SES Black, Cuban, Puerto Rican, and South American Immigrants," in T. Field, A. Sostek, P. Vietze, and P. Leiderman, eds., *Culture and Early Interaction* (Hillsdale, N.J.: Erlbaum, 1981), 41–60; Garcia Coll, "Minority Infants," 270–289.
30. E. Shapiro and R. Hernandez, "Family Support Services: A Needs Assessment," report presented for the Jamaica Plain Healthy Boston Coalition, Boston.
31. Rodriguez, "Avance," 155–170; G. Rodriguez and C. Cortez, "The Evaluation Experience of the AVANCE Parent-Child Education Program," in H. Weiss and F. Jacobs, eds., *Evaluating Family Programs* (New York: Aldine de Gruyter, 287–302).
32. Amaro, "Projecto Mama"; Amaro and Aguiar, "Projecto Mama", 125–149.
33. J. Jordan, A. Kaplan, J. Miller, I. Stiver, and J. Surrey, eds., *Women's Growth in Connection: Writings from the Stone Center* (New York: Guilford, 1991); J. Miller, *Toward a New Psychology of Women* (Boston: Beacon Press, 1987).
34. P. Freire, *Pedagogy of the Oppressed* (New York: Continuum, 1990; first publication, 1970); P. Freire, *The Politics of Education: Culture, Power and Liberation* (New York: Bergin and Harvey, 1985).
35. Freire, *Pedagogy of the Oppressed*; N. Wallerstein, "Powerlessness, Empowerment, and Health: Implications for Health Promotion Programs," *American Journal of Health Promotions* 6, no. 3 (1992): 97–205; N. Wallerstein and E. Bernstein, "Empowerment Education: Freire's Ideas Adapted to Health Education," *Health Education Quarterly* 15, no. 4 (1988): 379–394.
36. Shapiro, *Grief as a Family Process*; Shapiro, "Grief and Latino Families"; Shapiro, "ROCA High Risk Youth Project."

Puerto Ricans' Access to U.S. Health Care

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The shift toward cost containment in health policy over the past decade has had negative consequences for the most vulnerable populations in the country, namely, ethnic minorities, the poor, and the uninsured. The Puerto Rican population is significantly affected by this shift, yet little is known of their health care usage. This study investigates the extent to which Puerto Ricans' health care use is determined by the relationship between predisposing variables, enabling variables, need, and other contextual variables and probes the implications of the findings for health policy. The adult Puerto Rican subsample (n = 1598) of the Hispanic Health and Nutrition Examination Survey conducted by the National Center for Health Statistics between 1982 and 1984 is analyzed. The regression results show that gender, language, health insurance, regular source of care, and health status are significant predictors of the dependent variable, Puerto Ricans' last visit to a health care provider.

For Latinos, lack of access to health care is a critical problem that appears to have been greatly exacerbated during the past decade.¹ Shifts in health policy led to a number of trends in health care nationally that have had negative consequences for the most vulnerable populations in the United States. Key developments include a greater use of coinsurance and deductibles in private health insurance plans, increased out-of-pocket medical care costs, more widespread utilization of hospital preadmission screenings, an increase in ambulatory surgery, and the rapid growth of emergency care centers.

This article examines the determinants of Puerto Ricans' access to health care in the United States based on the conceptual framework developed by Aday and Andersen.² While much research has been conducted on the ability of the general population and Mexican-Americans in the Southwest to procure and use health care services,³ there is a dearth of such information about Puerto Ricans. Multiple explanations have been offered for this scarcity. When researchers include more than one Latino group, they tend to subsume all of them into one monolithic class,⁴ which overlooks important geographic, socioeconomic, and cultural differences among various Latino subgroups. Furthermore, this precludes the analysis of differential use of and barriers to health services utilization among them as well as its concomitant impact on the communities these groups represent.

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“Emerging demographic data suggest that the Latino population must be addressed as sui generis, reflecting immense heterogeneity in terms of national origin, socioeconomic status, and education, and the rapid shift from a rural to a predominantly urban population.”

— Ralph Rivera

Clearly, the need to understand the health care patterns of Puerto Rican usage is crucial. Puerto Ricans have been found to be in poorer health compared with other Latino subgroups.⁵ While a large percentage of this population is poor and has a low educational level,⁶ relatively little is known about their use of health care services and the barriers they face in obtaining it. Given these characteristics, Puerto Ricans may be the population most adversely affected by inequities in these areas.

Most of the limited number of studies on Puerto Ricans and health care use small, often nonprobability samples that seriously undermine generalizations and meaningful comparisons.⁷ Still other research that includes Puerto Ricans is based on surveys not specifically developed for this population.⁸ Here again, Puerto Ricans represent a minor percentage because the samples include numbers of ethnic groups in proportion to their representation in the general population and the sample Puerto Rican population itself tends to be small. While these studies have made important contributions in terms of descriptive information and statistics, they do not provide answers to more complex questions that can be investigated through use of a multivariate model.

There have been many conceptual and empirical attempts in the past thirty years to develop models and frameworks of health care utilization. The general objective of the models has been to "provide some order to and understanding of the discrete and sometimes bewildering patterns and trends observed in such use."⁹ However, efforts to address the unique health care-seeking habits of Latinos in general, and Puerto Ricans in particular, have been hampered by inadequate and inappropriate theoretical models. For example, the folk medicine model has, perhaps for too long, focused attention on Latinos' use of herbal remedies, curanderos, and spiritualists even when some empirical evidence suggests it is a relatively minor element of Latino and Puerto Rican health practices. While the social desirability factor must certainly be taken into consideration when Latinos are participating in research, the Hispanic Health and Nutrition Examination Survey found that only 2.4 percent of all Latinos and 1.3 percent of Puerto Ricans reported consulting folk healers.¹⁰ According to Hayes-Bautista, the "cultural deficit" model has also been improperly applied to Latinos. He states that "this model has focused on attempts to create a dichotomy between Anglo culture and Latino culture... totally ignoring the tremendous vitality, heterogeneity, and dynamism of the various Latino subpopulation cultures."¹¹ Another inappropriate conceptualization treats the Latino population as if it were virtually identical with the black population, ignoring two critical facts: Latinos are racially mixed, and nearly half the Latino population are immigrants or, in the case of Puerto Ricans, migrants. Even those models which recognize these realities are often based on the experiences of European immigrant groups, failing to acknowledge that migration from Puerto Rico and immigration from Mexico and the rest of Latin America are structurally different.¹²

Policies and programs in the health field contain implicit assumptions about people, their needs, and their behaviors. Emerging demographic data suggest that the Latino population must be treated as *sui generis*, reflecting immense heterogeneity in terms of national origin, socioeconomic status, and education, and the rapid shift from a rural to a predominately urban population. Furthermore, appropriate theoretical models of Latino health care use would have to address both the macro level — society and community — and the micro level — individual and family. Since such integrated research models of the Latino population and subpopulations have yet to be developed, I employ the well-known Aday and Andersen framework to examine Puerto Rican health care behavior.

Theoretical Model

The most widely used health systems model, developed by Ronald Andersen in 1968, is known as the behavioral model of health services utilization. The original model focused on the individual determinants of health care usage and has been empirically assessed in a number of studies with considerable success.¹³ The model was expanded, first by Andersen and Newman,¹⁴ then by Aday and Andersen,¹⁵ who incorporated suggestions that emerged from the extensive application of the model. Because it encompasses numerous variables at differing levels of analysis and provides both a conceptual and a methodological framework for the study of health care, the Aday and Andersen model has the potential to shed light on the health care-seeking behavior of Puerto Ricans.

In this conceptual framework, health care use is explained as a function of the characteristics of the population and contextual factors, including characteristics of the delivery system and consumer satisfaction. Characteristics of the population can be classified into three components: predisposing, enabling, and need. Predisposing variables, which allude to an individual's propensity to seek services, are characteristics that exist prior to the incidence of a specific illness episode, such as age, gender, and marital status. Enabling factors, such as income, health insurance, and type of regular source of care, allow individuals to address a health care need. The need component proposes that health care use is directly related to an individual's health status. Contextual factors of the framework include characteristics of the health delivery system such as "entry" (factors that either facilitate or hinder entrance to the medical care system) and "structure" (how a patient is treated after entry). Consumer satisfaction, which refers to a patient's satisfaction with the medical care received, is the final determinant of health care utilization considered in the analysis.

Methodology

The data, compiled between 1982 and 1984 by the Hispanic Health and Nutrition Examination Survey (HHANES) conducted by the National Center for Health Statistics, covered the health and nutritional status of three Latino groups: Mexican-Americans in five southwestern states, Puerto Ricans in the metropolitan New York area, including parts of Connecticut and New Jersey, and Cuban Americans in Dade County, Florida.¹⁶ Detailed descriptions of the HHANES's complex multistage cluster sampling design have been published elsewhere.¹⁷ My analysis, focused on the Puerto Rican sample ($n = 1,598$), includes subjects between the ages of eighteen and seventy-four. The first sample included approximately 59 percent of the U.S. Puerto Rican population reported in the 1980 census and about 90 percent of the Puerto Rican population in the Greater New York area. Therefore it was possible to make direct statistical inferences for the latter group.¹⁸

The HHANES measured the dependent variable, health care utilization, as the recency of a last visit to a clinic, health center, doctor's office, or other health care facility. It covered the time spans of (1) less than one month; (2) one month to less than six months; (3) six months to less than one year; (4) one year to less than five years; (5) five or more years; (6) never.

The *predisposing variables* included the sociodemographic variables age, gender, and marital status. Language, also considered a predisposing variable, was measured by two

options, language spoken and language preferred. These were coded as (1) Spanish only; (2) mostly Spanish, some English; (3) Spanish and English about equally; (4) mostly English, some Spanish; and (5) English only. I constructed a language score by averaging the two language items.

The *enabling variables* included annual family income, regular source of care, and health insurance coverage. Having an established source, as well as type of provider, has proved to be a critical variable in health care-seeking behavior.¹⁹ It was measured by a score that combined these two items. The first asked participants whether there is a particular clinic, health center, doctor's office, or other place they usually go to if sick or in need of advice about their health. Those who answered yes to this item were asked which type they frequented. If these people reported that their usual place of care is a doctor's office, a private clinic, an HMO, or a prepaid group, they receive a score of 4 on this variable. If they reported that their source is a community, neighborhood, family health center, or hospital outpatient clinic, they were assigned a score of 3 on the variable. If they reported as their regular source a hospital emergency room, a migrant, company, or school clinic, or any other clinic or other place of care, they were scored 2. Finally, all participants who reported that they did not have a usual place of care received a score of 1. Health insurance coverage included any private health plan that paid any part of a hospital, doctor's, or surgeon's bill (yes = 0; no = 1).

The *need variable*, health status, was measured by the participants' subjective perception of their health, namely, (1) excellent; (2) very good; (3) good; (4) fair; and (5) poor. Other contextual factors included in the analysis were organizational barriers measured by responses to questions as to whether the respondents encountered difficulty in accessing medical care because of any of the following: (1) cost; (2) provider did not speak Spanish; (3) inconvenient hours; (4) long wait for an appointment; or (5) long wait to be seen in an office or clinic (yes = 0; no = 1). Finally, consumer satisfaction with care was measured by asking respondents their degree of satisfaction with the care they had received at their last visit: (1) very satisfied; (2) somewhat satisfied; and (3) not at all satisfied.

Using sample weights, I computed frequencies for all the variables in the framework for the Puerto Rican sample. I used regression analyses to investigate the contributions of the predisposing, enabling, need, contextual, and satisfaction with care variables to health care utilization. Because the HHANES sampling design is complex, I chose for my analyses the *Standard Errors of Regressions Coefficients from Sample Survey Data*,²⁰ whose sample weights produce correct population estimates. Moreover, it takes the HHANES design into account and adjusts the variances accordingly.

Table 1 shows the distribution of the predisposing variables (gender, marital status, age, and language) and enabling variables (annual family income, regular source of care, and health insurance) among the sample. Table 2 shows the percentage distribution for the need, contextual (organizational barriers), satisfaction with care, and dependent variables (health care utilization).

Predisposing Characteristics

Puerto Ricans in the sample, a young overall population with a high percentage of women, have a number of predisposing characteristics that affect their utilization of health care services. Schur and colleagues found that Puerto Rican adults aged 55–64 were more apt than those aged 19–54 and the over-65 group to seek care, and that women were more disposed than men to seeing a physician.²¹

Table 1

Predisposing and Enabling Variables

Predisposing Variables	Percentage
Gender	
Men	39.3
Women	60.7
Marital Status	
Married	48.2
Widowed/divorced/separated	25.1
Never married	26.6
Age	
18-30	34.3
31-40	19.3
41-50	19.1
51-74	27.3
Language	
Spanish only	17.7
Mostly Spanish, some English	26.9
Spanish, English equally	38.9
Mostly English, some Spanish	13.7
English only	2.7
Enabling Variables	
Annual Family Income	
Less than \$10,000	44.6
\$10,000-\$19,999	31.5
\$20,000-\$29,999	11.1
\$30,000 or more	12.9
Regular Source of Care	
Doctor's office, private clinic, HMO, or PPG	45.8
Community, neighborhood, or family health center or hospital outpatient	30.0
Hospital emergency room, migrant, company, or school clinic, or any other facility	3.6
No regular source of care	20.6
Health Insurance	
Yes	48.1
No	51.9

Other sample characteristics reveal potential barriers to utilization. A substantial literature devoted to language as a major barrier to access and suitable health services for Latinos,²² has found that it is associated with lower health care usage for those who only speak Spanish,²³ which is indeed the dominant language for most of the participants. Almost 45 percent reported their language as "Spanish only" or "mostly Spanish, some English."

Table 2

Need, Contextual, and Dependent Variables

Need Variable	Percentage
Health Status	
Excellent	13.9
Very good	16.8
Good	32.1
Fair	29.6
Poor	7.6
Contextual Variables	
Organizational Barriers	
Yes	34.0
No	66.0
Satisfaction with Care	
Very satisfied	75.5
Somewhat satisfied	16.3
Not at all satisfied	8.2
Dependent Variable	
Last Health Care Visit	
Less than one month	26.4
One month to less than six months	30.2
Six months to less than one year	17.9
One year to less than five years	20.8
Five or more years	4.4
Never	0.3

Enabling Characteristics

The sample's ability to obtain health services is affected by a number of enabling characteristics as well. Empirical evidence shows that the poor tend to make fewer health care visits than the affluent despite their generally worse health and greater likelihood of chronic or serious illness.²⁴ Almost 45 percent of the respondents report an annual family income of \$10,000 or less, which is expected to hinder their health care use. Having a regular source of care proves to be a good predictor of health care use,²⁵ and more than 45 percent of the sample reported that they visited a doctor's office, private clinic, HMO, or prepaid group (score of 4). Moreover, while various studies have found that Puerto Ricans overutilize hospital emergency rooms,²⁶ which for many are a principal point of entry to the medical system,²⁷ relatively few in this sample assert that they regularly visit emergency rooms. Less than 4 percent stated that they use either a hospital emergency room, migrant, company, or school clinic, or any other facility (score of 2) to obtain regular care.

Lack of health insurance has been found to reduce an individual's access to health care. According to one study, Puerto Ricans with such coverage were 50 percent more likely than their uninsured counterparts to consult a physician.²⁸ Forty-eight percent of the sample reported having private health insurance coverage.

Need

Medical need is a strong predictor of health care utilization, and the sample subjects were more apt to report their health as fair or poor (37%) than excellent or very good (30%). This suggests that a significant number of these people need health care services, so that this variable is expected to play a critical role in Puerto Ricans' use of medical services.

Contextual Variables: Organizational Barriers and Patient Satisfaction

Entry, in Aday and Andersen's framework, alludes to gaining entrance to the health care system and the organizational barriers that hinder access to it. Barriers that may adversely affect Puerto Ricans' entry and are therefore considered in the study are costs of care, availability of Spanish-speaking staff, inconvenient office hours, long wait for appointments, and long wait before being seen. (The distance of the health facility from home and availability of transportation is another consideration.) Puerto Ricans are more likely to incur medical expenses, yet less likely than other Latino subgroups to pay bills out of pocket, suggesting that cost of care is not a barrier for the subject group.²⁹ Various studies have documented the impact of the lack of Spanish-speaking personnel on Latino health care utilization.³⁰ Moreover, inconvenient office hours and long appointment and office waiting time tend to influence where people go for care, how often they go, and their degree of satisfaction with the care they eventually receive.³¹ Dutton found that particular organizational barriers such as limited hours, long lead times for appointments, and long office waiting times are more prevalent in settings used primarily by the poor, and are therefore expected to influence Puerto Rican health care use.³² More than one-third of the sample reported encountering an organizational barrier to health care.

Patient satisfaction with health care is often cited as a measure of the quality of medical care and a variable that may affect health care usage. Some research on this variable indicates that Latinos, of all racial/ethnic groups studied, are the most dissatisfied with the cost of medical care, appointment and office waiting time, and interaction with providers.³³ However, more than 75 percent of the participants reported that they were satisfied with the health care they had received.

Results

Table 3 presents the regression coefficients and standard errors for the health care utilization variable. In the table, the adjusted R^2 shows that the group of independent variables in the regression equation explain 16.3 percent of the total variance in "last health care visit." This percentage is comparable to that found in numerous other multivariate studies on health care utilization using large samples and powerful statistical techniques.³⁴ Therefore, the model has some value to the extent that it delineates interrelationships and the relative importance of the different potential determinants of Puerto Rican health care use.

As for the particular influences of the independent variables for the sample, Table 3 shows that the *predisposing variables*, gender ($-.177$; $p < .0007$) and language ($.077$; $p < .0001$) significantly predict levels of the dependent variable, as do the *enabling variables*, regular source of care ($-.238$; $p < .0001$) and health insurance ($-.060$; $p < .03$), and

Table 3

**Regression Analyses of Predisposing, Enabling,
Need, and Contextual Variables**

Predisposing Variables	b ^a	SE ^b
Age	-.036	.003
Gender	-.177*	.069
Marital status	.041	.072
Language	.077*	.041
Enabling Variables		
Annual family income	-.0003	.005
Regular source of care	-.238*	.030
Health insurance	-.060**	.082
Need Variable		
Health status	-.144*	.033
Contextual Variables		
Barriers to care	.033	.074
Satisfaction with care	-.014	.056
Adjusted R ²	.163	
F	24.25	
P	<.001	

^aWeighted regression coefficients.

^bAdjusted standard errors.

*Significant at $p < .001$.

**Significant at $p < .05$.

the *need variable*, health status ($-.144$; $p < .001$). Annual family income is a poor predictor of health care use by Puerto Ricans and does not produce any perceptible effect on the dependent variable. In addition, age, marital status, organizational barriers, and satisfaction with care show no substantial influence on Puerto Rican health care use. In summary, for the subject population, the predisposing variables gender and language, the enabling variables regular source of care and health insurance, and the need variable health status are all associated with a relatively recent health care visit. Therefore, they are the most important determinants of Puerto Ricans' usage of health care.

Discussion

The regression analysis shows that gender and primary language significantly influence Puerto Rican health care utilization, but that age and marital status do not. Gender is the second strongest predictor of use in the model. Consistent with the literature,³⁵ the regression results indicate that Puerto Rican women tend to have visited a facility more recently than their male counterparts.

Furthermore, as Puerto Ricans' English language orientation increases, so does the recency of last health care visits. The fact that English-speaking Puerto Ricans tend to have been to a health facility more recently than their Spanish-speaking counterparts indicates that language is a barrier which hinders Puerto Ricans from obtaining health services. Given that the Puerto Rican community of New York City is more than one hundred years old and that there are more than 1.5 million Puerto Ricans in the Greater New York City area, this is a somewhat surprising finding, but it suggests that recent arrivals from the island may be contributing to lack of health care use.

The regression results show that status of health is another strong predictor of this group's health care usage. As Puerto Ricans' perceived status of health declines, their last visit to a health service is more recent. The regression results also indicate that Puerto Ricans' health care use does not vary significantly with annual family income. Surprisingly, it is a poor predictor of use and produces no perceptible effect on the dependent variable.

Moreover, the regression results reveal that health care utilization among Puerto Ricans does vary significantly with the presence and type of regular source of care. The regression shows that a regular source was the strongest predictor of health care use by Puerto Ricans. As their regular source score increases, so does their usage of health services. Therefore, Puerto Ricans whose usual source of care is a doctor's office, private clinic, HMO, or prepaid group (a score of 4) show more recent visits for health services.

Finally, the regression shows that health insurance is significantly associated with last health care visit, but not in the manner hypothesized. People not covered by private health insurance had more recent health care visits. There are at least two possible explanations for this finding. First, it is possible that the large number of public hospitals and health facilities in the Greater New York City area have made health care available even for the uninsured. Other studies have documented that a greater proportion of New York City Puerto Ricans seek services at public than at private hospitals.³⁶ Second, the Puerto Rican population is the most likely of all racial/ethnic groups to have Medicaid as their sole health coverage.³⁷ This program probably facilitates their access to health care.

Policy and Program Implications

Two of the enabling variables found in my study to have a significant impact on Puerto Ricans' health care utilization, regular source of care and health insurance coverage, can indeed be leveraged by health planners and policymakers. Thus, efforts at increasing the availability of a usual source of care for Puerto Ricans might be effective in increasing access to regular health services as well as preventive care.

As noted above, the results also show that Puerto Ricans without private health insurance have visited a health care facility more recently than those who are insured. One of the possible explanations is the uninsured population's wide Medicaid coverage. If this is accurate, any policy change that tightens Medicaid eligibility criteria would undoubtedly have detrimental consequences for Puerto Ricans.

As for the role of gender in Puerto Rican health care use, the fact that women are more prone to take advantage of health services suggests several issues: (1) the role that women have in access issues vis-à-vis men; (2) the role that women as single heads of households play in determining need for family health care; (3) the importance of improving access for Puerto Ricans; and (4) including the family as a health care unit

may encourage the use of preventive health care over single service delivery. Health planners and administrators should consider specific outreach efforts targeted at Puerto Rican men and seek to provide culturally sensitive health care services.

Finally, since English-speaking Puerto Ricans tend to have visited a health care more recently than their Spanish-speaking counterparts, language must be considered a barrier that hinders access to health services, especially for newcomers from Puerto Rico. This would argue for health policymakers, planners, and administrators to develop more effective strategies aimed at recruiting and hiring Puerto Ricans and other Spanish-speaking personnel, particularly physicians, nurses, and administrators, for all health care systems.

To sum up, this study indicates the need to focus on the specificity of Puerto Ricans in terms of their access to health care and the types of intervening variables that must be taken into account to provide more effective and direct health services. ■

Notes

1. "Hispanic Access to Health Care: Significant Gaps Exist," Report to Congressional Requesters, U.S. General Accounting Office (GAO/PEMD-92-6), January 1992; National Hispanic Health Policy Summit, "Summary of Discussions and Recommendations in Assessing Hispanic Health Needs," draft, April 8, 1992.
2. L. A. Aday and R. M. Andersen, "A Framework for the Study of Access to Medical Care," *Health Services Research* 9, no. 3 (1974): 208-220; L. A. Aday and R. Andersen, *Development of the Indices of Access to Medical Care* (Ann Arbor: University of Michigan, Health Administration Press, 1975); L. A. Aday and R. M. Andersen, "Equity of Access to Medical Care: A Conceptual and Empirical Framework," *Medical Care* 19, no. 12 (1981): 4-27.
3. See, for example, R. Andersen et al., "Access to Medical Care among the Hispanic Population of the Southwestern United States," *Journal of Health and Social Behavior* 22 (1981): 78-89; L. R. Chavez et al., "Mexican Immigrants and the Utilization of U.S. Health Services: The Case of San Diego," *Social Science and Medicine* 21 (1985): 93-102; A. P. Chesney et al., "Barriers to Medical Care of Mexican-Americans: The Role of Social Class, Acculturation, and Social Isolation," *Medical Care* 20 (1982): 883-891; K. S. Markides et al., "Determinants of Physician Utilization among Mexican-Americans: A Three-Generation Study," *Medical Care* 23 (1985): 236-246.
4. R. M. Andersen et al., "Access of Hispanics to Health Care and Cuts in Services: A State-of-the-Art Overview," *Public Health Report* 101, no. 3 (1986): 238-252; S. Guendelman and J. Schwalbe, "Medical Care Utilization by Hispanic Children: How Does It Differ from Black and White Peers?" *Medical Care* 24, no. 10 (1986): 925-937; D. J. Hu and R. M. Covell, "Health Care Usage by Hispanic Outpatients as a Function of Primary Language," *Western Journal of Medicine* 144 (1986): 490; Robert Wood Johnson Foundation, *Access to Health Care in the United States: Results of a 1986 Survey*, Special Report No. 2 (Princeton, 1987).
5. A. Harper, *The Health of Populations: An Introduction* (New York: Springer, 1986); C. L. Schur et al., "The Importance of Distinguishing Hispanic Subpopulations in the Use of Medical Care," *Medical Care* 25, no. 7 (1987): 627-641.
6. J. M. Garcia "The Hispanic Population in the United States: March 1992," Current Population Reports, P-20-465, U.S. Bureau of the Census, 1993.
7. J. O. Alers, "Puerto Ricans and Health: Findings from New York City," Hispanic Research Center Monograph 1 (Bronx, N.Y.: Fordham University, 1978); H. C. Chase and F. G. Nelson, "A Study of Risks, Medical Care, and Infant Mortality, III: Education of Mother,

- Medical Care, and Condition of Infant," *American Journal of Public Health Care* 63, Supplement (1973): 27–40; V. Garrison, "Doctor, Espiritista, or Psychiatrist: Health Seeking Behavior in a Puerto Rican Neighborhood of New York City," *Medical Anthropology* 1, no. 2 (1977): 65–180; A. Harwood, *Rx: Spiritist as Needed: A Study of a Puerto Rican Community Mental Health Resource* (New York: Wiley, 1977); A. Harwood, "Mainland Puerto Ricans," in *Ethnicity and Medical Care*, ed. A. Harwood (Cambridge: Harvard University Press, 1981), 397–481; L. S. Lieberman, "Medico-nutritional Practices among Puerto Ricans in a Small Urban Northeastern Community in the United States," *Social Science and Medicine* 13B (1979): 191–198; S. L. Schensul and J. J. Schensul, "Helping Resource Use in a Puerto Rican Community," *Urban Anthropology* 11, no. 1 (1982): 59–79.
8. Guendelman and Schwalbe, "Medical Care Utilization by Hispanic Children"; Schur et al., "The Importance of Distinguishing Hispanic Subpopulations"; F. M. Trevino and A. J. Moss, "Health Insurance Coverage and Physician Visits among Hispanic and Non-Hispanic People," in *Health — United States*, DHHS Pub. No. (PHS) 84-1232 (Washington, D.C.: Public Health Service, U.S. Government Printing Office, December 1983), 45–48; F. M. Trevino and A. J. Moss, "Health Indicators for Hispanic, Black, and White Americans," National Center for Health Statistics, DHHS Pub. No. (PHS) 84-1576, September 1984.
 9. R. Andersen and O. W. Anderson, "Trends in the Use of Health Services," in H. E. Freeman et al., eds., *Handbook of Medical Sociology*, 3d ed. (Englewood Cliffs, N.J.: Prentice-Hall, 1979), 383.
 10. National Center for Health Statistics. *Hispanic Health and Nutrition Examination Survey: 1982–1984*, Public Use Data Tape Documentation (Washington, D.C.: U.S. Government Printing Office, 1987).
 11. D. Hayes-Bautista, *Report on Development of a Model Latino Health Policy Center: A Blueprint for Action* (Los Angeles: Chicano Studies Research Center, University of California, 1989), 3–4.
 12. Ibid.
 13. See, for example, R. Andersen et al., *Two Decades of Health Services* (Cambridge: Ballinger, 1976); S. E. Berki and B. Kobashigawa, "Socioeconomic and Need Determinants of Ambulatory Care Use: Path Analysis of the 1970 Health Interview Survey Data," *Medical Care* 14, no. 5 (1976): 405–421; F. D. Wolinsky, "Assessing the Effects of Predisposing, Enabling, and Illness-morbidity Characteristics on Health Services Utilization," *Journal of Health and Social Behavior* 19, no. 4 (1978): 384–396.
 14. R. Andersen and J. F. Newman, "Societal and Individual Determinants of Medical Care Utilization," *Milbank Memorial Fund Quarterly* 51 (1973): 95–124.
 15. Aday and Andersen, "A Framework for the Study of Access to Medical Care"; Aday and Andersen, *Development of Indices of Access to Medical Care*.
 16. K. R. Maurer et al., *Plan and Operation of the Hispanic Health and Nutrition Examination Survey, 1982–84*, Vital and Health Statistics Series 1, No. 19, DHHS Pub. No. 85-1321 (Washington, D.C.: National Center for Health Statistics, U.S. Government Printing Office, 1985).
 17. J. S. Findlay and T. M. Ezzati, "Quality Control," in *ibid.*, 46–51.
 18. Maurer et al., *Plan and Operation of the Hispanic Health and Nutrition Examination Survey*.
 19. L. A. Aday et al., *Health Care in the U.S.: Equitable for Whom?* (Beverly Hills: Sage, 1980); L. A. Aday and R. M. Andersen, "The National Profile of Access to Medical Care: Where Do We Stand?" *American Journal of Public Health* 74 (1984): 1331–1339.

20. M. M. Holt, *SURREGR: Standard Errors of Regression Coefficients from Sample Survey Data* (Research Triangle Park, N.C.: Research Triangle Institute, 1977).
21. Schur et al., "The Importance of Distinguishing Hispanic Subpopulations."
22. R. I. Ailinger, "A Study of Illness Referral in a Spanish-Speaking Community," *Nursing Research* 26, no. 1 (1977): 53-56; M. Barrera, "Mexican-American Mental Health Service Utilization: A Critical Examination of Some Proposed Variables," *Community Mental Health Journal* 14, no. 1 (1978): 35-45; R. Galbis, "Mental Health Services of a Hispano Community," *Urban Health* (September 1977): 31-35; R. E. Roberts and E. S. Lee, "Medical Care Use by Mexican-Americans: Evidence from the Human Population Laboratory Studies," *Medical Care* 18 (1980): 266-281.
23. Hu and Covell, "Health Care Usage by Hispanic Outpatients."
24. Johnson Foundation, *Access to Health Care in the United States*.
25. Aday et al., *Health Care in the U.S.*; Aday and Andersen, "The National Profile of Access to Medical Care; V. C. Kennedy, "Rural Access to a Regular Source of Medical Care," *Journal of Community Health* 4 (1979): 199; J. J. Kronenfeld, "Provider Variables and the Utilization of Ambulatory Care Services," *Journal of Health and Social Behavior* 19, no. 1 (1978): 68-76.
26. Alers, "Puerto Ricans and Health."
27. Lieberman, "Medico-nutritional Practices among Puerto Ricans"; L. Podell, "Health Care of Pre-school Children in Families on Welfare," *New York State Journal of Medicine* 73 (1973): 1120-1123; Schensul and Schensul, "Helping Resource Use in a Puerto Rican Community."
28. Schur et al., "The Importance of Distinguishing Hispanic Subpopulations."
29. Ibid.
30. See, for example, Barrera, "Mexican-American Mental Health Service Utilization"; Roberts and Lee, "Medical Care Use by Mexican-Americans."
31. See, for example, Andersen et al., "Access to Medical Care among the Hispanic Population of the Southwestern United States"; D. B. Dutton, "Financial, Organizational and Professional Factors Affecting Health Care Utilization," *Social Science and Medicine* 23, no. 7 (1986): 721-735; and J. A. Kasper and M. L. Berk, "Waiting Times in Different Medical Settings: Appointment Waits and Office Waits," Data Preview 6, *National Health Care Expenditures Study*, DHHS Pub. No. (PHS) 81-3296 (Washington, D.C.: National Center for Health Services Research, 1981).
32. Dutton, "Financial, Organizational, and Professional Factors."
33. Andersen et al., "Access to Medical Care among the Hispanic Population."
34. D. Mechanic, "Correlates of Physician Utilization: Why Do Major Multivariate Studies of Physician Utilization Find Trivial Psychosocial and Organizational Effects?" *Journal of Health and Social Behavior* 20 (1979): 387-396.
35. Trevino and Moss, "Health Indicators."
36. Alers, "Puerto Ricans and Health."
37. Trevino and Moss, "Health Insurance Coverage and Physician Visits."

“What happens behind U.S. Puerto Ricans’ closed doors cannot be disassociated from what happens in the ‘mean streets’ which Piri Thomas has so vividly described. The so-called new morbidities resulting from drugs, sex, violence, depression, and stress have had a differential impact on this community.”

— Annette B. Ramírez de Arellano

Premature Mortality among U.S. Puerto Ricans, 1989

Annette B. Ramírez de Arellano, D.P.H.

The indicator “years of potential life lost” (YPLL) points out the extent to which premature death among Puerto Ricans residing in the United States is a function of behaviors and social conditions. The computation of YPLL for various causes of death highlights the devastating effect of HIV infection, which emerges as the leading cause of premature death for both genders. Indeed, a 50 percent reduction in the HIV/AIDS death toll would save more years of potential life than the complete eradication of both cancer and diabetes. Accidents and homicides follow HIV as leading causes of YPLL.

This indicator also underscores gender-specific vulnerabilities. Men comprise less than half the U.S. Puerto Rican population, but they account for 61.1 percent of all deaths and 73 percent of YPLL. While they do not permit an analysis of changes over time, these cross-sectional data reflect general trends in Puerto Rico, where gender differentials are also marked, and deaths related to unprotected sex, drug use, and violence have displaced traditional pathophysiological conditions as the leading causes of premature death.

Death has been called the ultimate “sentinel event,” alerting decision makers to the fact that something is wrong with the body politic. In the health field, mortality data are variously seen as expressions of specific vulnerabilities, indexes of environmental and other risk factors, and indicators of service gaps. Taken collectively, mortality rates may represent “the quantification of a population’s collective tragedy.”¹

Not until 1989 were Hispanic/Latino identifiers included on the standard registration certificates for vital events recommended for use by the United States.² As a result, the mortality experience of U.S. Puerto Ricans was captured only in certain areas, and an accurate picture of how Puerto Ricans were faring nationally was not available until relatively recently. This lack of data has hindered the identification of specific health problems, hence the design of adequate strategies to address them. Lack of data has also had negative implications for funding. Because reliable base lines and objectives have not been available, Latinos have been overlooked or neglected in many of the federal government’s Healthy People 2000 objectives. And because funding allocations at the federal, state, and local levels have been based on the guidelines established in that program, Latinos have not been targeted in many health promotion and disease prevention initiatives.

This article examines the 1989 mortality data for U.S. Puerto Ricans by computing years of potential life lost (YPLL) for the population as a whole by cause and by gender. Establishing this benchmark allows changes to be studied over time, thereby providing

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planners the data to establish priorities and to design, carry out, and assess programs to prevent premature mortality.³

Methods

While the crude death rate is often used to rank the relative importance of the various conditions affecting a population, this indicator tends to reflect deaths occurring at older ages, when intervention strategies are less effective.⁴ YPLL has gained increasing currency in assessing premature mortality. First contemplated in 1687,⁵ this indicator is being used in a number of countries, including the United States, Canada, Israel, and Italy.⁶

YPLL seeks to compare the relative importance of various causes of death for a specific population — here, Puerto Ricans in the United States. YPLL is defined as the number of years of life lost by persons who die before reaching age 65. The calculation of YPLL for a particular cause involves adding the number of deaths of people between one and 64 years of age occurring in each ten-year age group, multiplied by the difference between 65 and the midpoint on the given age range. The figure for YPLL for that cause is therefore the sum, over all persons dying from that cause, of the years that they would have lived had they completed normal life expectancy.⁷

While there has been some debate concerning both the exclusion of infant deaths and the appropriate cutoff point for defining “prematurity,” I have followed Romeder and McWhinnie in excluding deaths under age one. They argue that the inclusion of infant deaths would represent “an overestimation of the value accepted by society for such a loss.”⁸ Moreover, these deaths are largely attributable to age-specific causes or conditions that are negligible among other age groups. At the same time, I have defined death before age 65 as “premature,” because this is the cutoff age used in calculations in the United States and because it coincides with the age groups as tabulated and published in the national vital statistics.⁹

Because I sought to analyze the experiences of the sexes and therefore compare two populations of different sizes, I computed a rate by dividing the YPLL for each cause and gender by the total population between the ages of one and 64 in the respective gender. I then multiplied this product by 1,000, so that the rate is expressed in terms of years of potential life lost per thousand. I calculated sex-specific YPLL and YPLL rates for twelve causes, following the vital statistics aggregates of the ninth revision of the International Classification of Diseases. Each of these causes was responsible for at least 190 deaths during 1989, the most recent year for which complete vital statistics have been reported.

Findings

As Table 1 indicates, the ranking of the leading causes of death is significantly altered when YPLL rather than the crude mortality rate is used. With the exception of the catchall category of “symptoms, signs, and ill-defined conditions,” substituting one indicator for another shifts the relative importance of all other conditions. Five conditions alter their ranks by more than two rungs. Diseases of the heart and malignant neoplasms, traditionally considered the two leading causes of death for both the U.S. population as a whole and the Puerto Rican population, rank fourth and fifth, respectively, when YPLL is computed. Cerebrovascular diseases, which have a differential impact on older age groups, are also significantly downgraded when only premature deaths are

considered. At the same time, the devastating impact of AIDS is highlighted, as it becomes the leading cause of YPLL. Indeed, a 50 percent reduction in the AIDS death toll, which is theoretically possible, would save more years of potential life than the eradication of cancer and diabetes combined.

Table 1

Relative Ranks of Causes of Death by Indicator,
U.S. Puerto Ricans, 1989

Cause of Death	Crude Death Rate	YPLL
Diseases of heart (390–398, 402, 404–429) ^a	1	4
Malignant neoplasms (140–208)	2	5
HIV infection (042–044)	3	1
Accidents and adverse effects (E800–E949)	4	3
Homicide and legal intervention (E960–E978)	5	2
Symptoms, signs, and ill-defined conditions (780–799)	6	6
Cerebrovascular diseases (430–438)	7	10
Pneumonia and influenza (480–487)	8	9
Chronic liver disease and cirrhosis (571)	9	8
COPD and allied conditions (490–496)	10	12
Diabetes mellitus (250)	10	11
Suicide (E950–E959)	11	7

Source: Based on National Center for Health Statistics, Department of Health and Human Services, *Vital Statistics of the United States*, 1989, vol. 2, *Mortality*, DHHS Pub. No. (PHS) 92-1102 (Washington, D.C.: U.S. Government Printing Office, 1992).

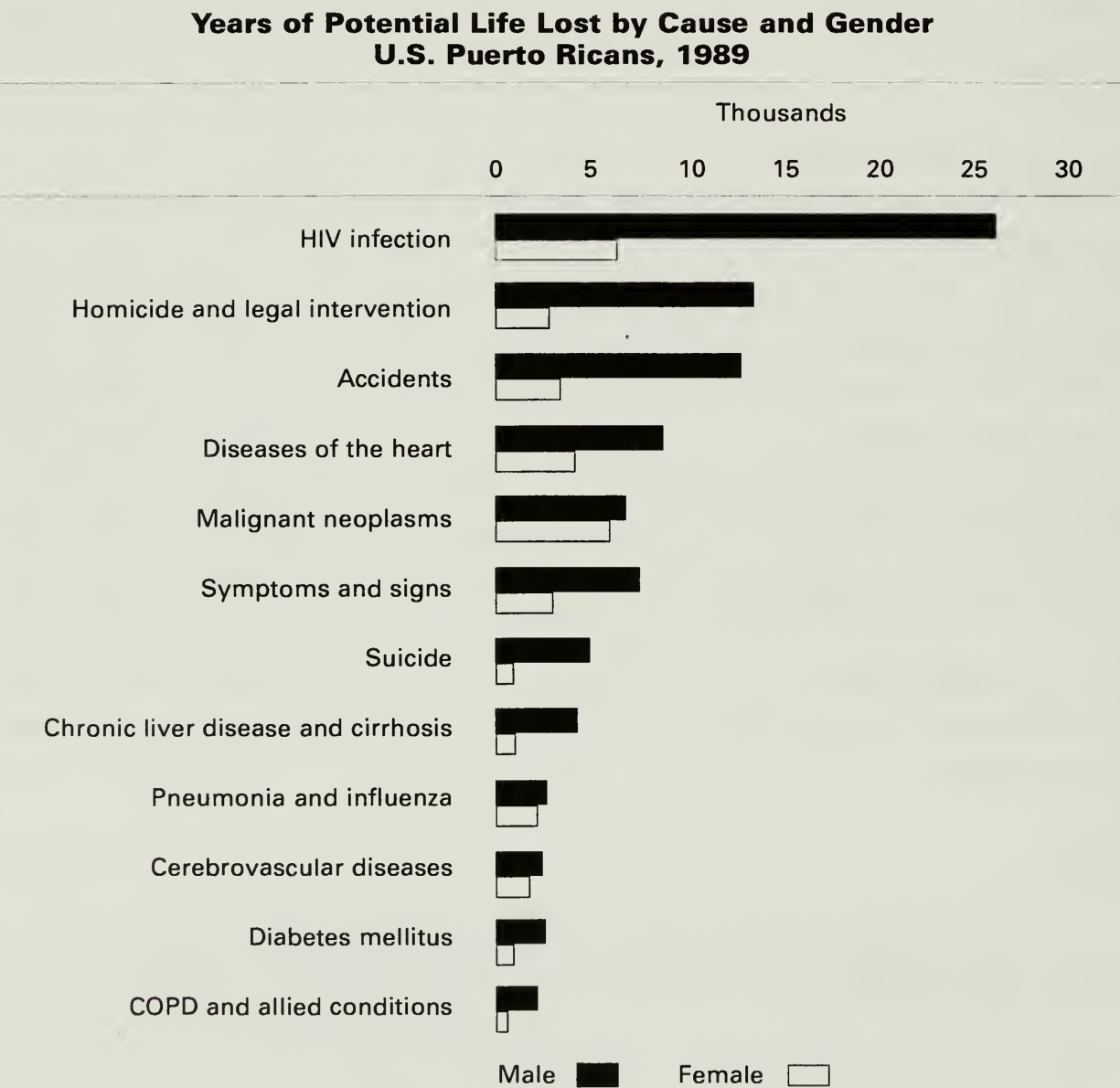
^a Numbers in parentheses refer to specific causes from the Ninth Revision of the International Classification of Diseases.

Two causes of external deaths — homicide and legal intervention and suicide — also become more salient, thereby suggesting the violent conditions under which many Puerto Ricans live and die prematurely. Accidents follow AIDS and homicides as the

third leading cause of YPLL, further underlining the extent to which premature death among Puerto Ricans in the United States is more a function of lifestyles and behaviors than of medical conditions.

The breakdown of YPLL by sex reveals the degree to which premature mortality is a male phenomenon. While men constituted only 48.8 percent of the U.S. Puerto Rican population in 1989, they accounted for 61.1 percent of all deaths and 73 percent of all YPLL reported that year. Thus, the male-to-female rate of years of potential life lost is 2.8 times higher for males than for females. Without exception, all twelve leading causes of death have a greater impact on men. Figure 1 and Table 2 illustrate the differences in mortality by gender, once again showing the differential impact of AIDS, violent deaths, and chronic liver disease and cirrhosis (associated with the consumption of alcohol) in men. As the last column in Table 2 indicates, the effect of these causes among Puerto Rican males is approximately fourfold that of females.

Figure 1



Source: Based on National Center for Health Statistics, Department of Health and Human Services, *Vital Statistics of the United States, 1989*, vol. 2, *Mortality*, DHHS Pub. No. (PHS) 92-1102 (Washington, D.C.: U.S. Government Printing Office, 1992).

Table 2

YPLL Rate by Cause and Sex, U.S. Puerto Ricans, 1989

Cause	Male	Female	Male:Female Rate Ratio
All causes	81.8	28.8	2.8
HIV infection (042-044) ^a	20.7	4.7	4.4
Homicide and legal intervention (E960-E978)	10.5	2.2	4.8
Accidents and adverse effects (E800-E978)	9.6	2.5	3.8
Diseases of heart (390-398, 402, 404-429)	6.6	3.3	2.0
Malignant neoplasms (140-208)	5.3	4.3	1.2
Symptoms, signs, and ill-defined conditions (780-799)	5.5	1.8	3.1
Suicide (E950-E959)	3.7	0.5	7.4
Chronic liver disease and cirrhosis (571)	3.2	0.6	5.3
Pneumonia and influenza (480-487)	1.4	1.0	1.4
Cerebrovascular diseases (430-438)	1.1	0.8	1.4
Diabetes mellitus (250)	1.1	0.4	2.8
COPD and allied conditions (490-496)	0.9	0.1	9.0

Source: Based on National Center for Health Statistics, Department of Health and Human Services, *Vital Statistics of the United States*, 1989, vol. 2, *Mortality*, DHHS Pub. No. (PHS) 92-1102 (Washington, D.C.: U.S. Government Printing Office, 1992).

^aNumbers in parentheses refer to specific causes from the Ninth Revision of the International Classification of Diseases.

Tables 3 and 4 present the frequency distribution of the leading causes of YPLL by gender. Among men, the effect of AIDS is evident, with this cause representing more than one-fourth of all years of potential life lost. Moreover, the three top causes of YPLL represent almost half of all the losses reported in 1989. Among females, the pattern is more dispersed: while AIDS also emerges as the predominant cause of premature death, it accounts for a substantially smaller share of the total YPLL. Furthermore, in contrast to those of men, the other leading causes of premature death among women (cancer, diseases of the heart) reflect conditions that are more amenable to health interventions.

Table 3

**Percentage Distribution of YPLL by Cause,
Male U.S. Puerto Ricans, 1989**

Cause	Percentage
HIV infection (042-044) ^a	25.3
Homicide and legal intervention (E960-E978)	12.8
Accidents and adverse effects (E800-E978)	11.7
Diseases of heart (390-398, 402, 404-429)	8.1
Symptoms, signs, and ill-defined conditions (780-799)	6.8
Malignant neoplasms (140-208)	6.4
Suicide (E950-E959)	4.6
Chronic liver disease and cirrhosis (571)	3.9
Pneumonia and influenza (480-487)	1.7
Diabetes mellitus (250)	1.4
Cerebrovascular diseases (430-438)	1.4
COPD and allied conditions (490-496)	1.1
Total YPLL of All Causes	85.20

Source: Based on National Center for Health Statistics, Department of Health and Human Services, *Vital Statistics of the United States*, 1989, vol. 2, *Mortality*, DHHS Pub. No. (PHS) 92-1102 (Washington, D.C.: U.S. Government Printing Office, 1992).

^aNumbers in parentheses refer to specific causes from the Ninth Revision of the International Classification of Diseases.

Discussion

YPLL points out the importance of using appropriate indicators to measure health status. All too often we speak of "leading causes" or "priority health problems" without specifying what yardstick we are using to rank different conditions or what we seek to accomplish. If our object is to add years to life, the crude mortality rate may provide a

Table 4

**Percentage Distribution of YPLL by Cause,
Female U.S. Puerto Ricans, 1989**

Cause	Percentage
HIV infection (042-044) ^a	16.2
Malignant neoplasms (140-208)	14.8
Diseases of heart (390-398, 402, 404-429)	11.4
Accidents and adverse effects (E800-E978)	8.6
Homicide and legal intervention (E960-E978)	7.5
Symptoms, signs, and ill-defined conditions (780-799)	6.3
Pneumonia and influenza (480-487)	3.6
Cerebrovascular diseases (430-438)	2.7
Chronic liver disease and cirrhosis (571)	2.0
Suicide (E950-E959)	1.8
Diabetes mellitus (250)	1.4
COPD and allied conditions (490-496)	.4
Total YPLL, of All Causes	76.7

Source: Based on National Center for Health Statistics, Department of Health and Human Services, *Vital Statistics of the United States*, 1989, vol. 2, *Mortality*, DHHS Pub. No. (PHS) 92-1102 (Washington, D.C.: U.S. Government Printing Office, 1992).

^aNumbers in parentheses refer to specific causes from the Ninth Revision of the International Classification of Diseases.

useful approximation of what problems we wish to attack. But if the goal is to add life to years, then years of potential life lost is the indicator of choice. By focusing on premature mortality, we identify areas that may be amenable to primary and secondary prevention. Moreover, it has been pointed out that YPLL is a fairer and more ethically appropriate measure of health status, since it weights each person's death by the amount of possible life forgone.¹⁰

Because 1989 is the first year for which complete data are available for U.S. Puerto Ricans, it is impossible to compare the mortality situation with previous or subsequent

years. Nevertheless, the predominance of HIV infection and violent deaths mirrors trends in Puerto Rico. In the island, mortality patterns, both overall and by gender, have shifted noticeably over the past decade. While HIV did not appear among the leading causes of YPLL in Puerto Rico in 1986,¹¹ it ranked fourth in 1987.¹² Accidents and homicides have retained their relative primacy in the island, occupying the first and fourth rungs, respectively, in both 1978 and 1987, two years for which YPLL were computed and published.¹³ At the same time, the island has experienced a widening of the gender gap in premature mortality. While the YPLL rate for males was 2.4 times that of females in 1978, the gender ratio rose to 2.7 by 1987.¹⁴ This is ironic because the restrictions traditionally placed on Puerto Rican women in the home, in the workplace, and in the corridors of power have eroded. Still, the idea of "separate spheres," under which women rule over the domestic domain while men control the public arena, continues to protect women against a variety of risk factors. Females therefore live different lives and die different deaths.

The overall gender differentials in premature mortality documented among U.S. Puerto Ricans are comparable to those registered in Puerto Rico. Nevertheless, the gap in certain causes, including HIV and homicide, is higher there than among mainland Puerto Ricans. This suggests that the factors which protect women are operating more effectively in the island or, conversely, that U.S. Puerto Rican males are exposed to greater risks than their island counterparts.

Although the 1987 data for Puerto Rico are not strictly comparable to those for U.S. Puerto Ricans, suicide and ill-defined signs and symptoms, the two leading causes of YPLL in the United States, are of only marginal importance in Puerto Rico. Suicide, which is significantly more prevalent among males, is the seventh cause of YPLL among U.S. Puerto Ricans. Almost three-fourths (75.6%) of U.S. Puerto Rican males who commit suicide are between the ages of fifteen and forty-five. In general, suicide is associated with family conflicts, social isolation, homelessness, unemployment, and drug and alcohol abuse.¹⁵ Among immigrants and minorities, the stresses of discrimination, uprootedness, and marginalization also take their toll. The data therefore indicate that young Puerto Rican males are at particular risk for depression and demoralization, and that the quest for the "American dream" may quite literally lead to a dead end.

Symptoms, signs, and ill-defined conditions, which often serves as a residual category, is also an important cause of YPLL, particularly among males. Because this rubric is usually assigned to those who have not received prior medical care, this cause of death suggests a lack of access to services.

Implications for Policy

The data presented here indicate that pathophysiological conditions play a secondary role in the premature mortality of Puerto Ricans in the United States. As a result, the effect of the medical care system varies from slight to negligible. While the Puerto Rican community should support greater access to services and a more equitable allocation of health care resources, there should also be recognition of the fact that health care reform will scarcely make a dent in the numbers on premature mortality in this population.

As Table 5 illustrates, all five leading causes of YPLL have precursors rooted in social conditions. Changes in these circumstances will therefore require interventions in both individual behaviors and the broader environment in which these behaviors are embedded. Public health initiatives in health promotion and disease prevention will

thus have to proceed along two tracks: (1) emphasizing behavioral change and individual responsibility, and (2) broadening the targets of intervention to include families, organizations, the political system, and the environment as a whole.¹⁶

Table 5

**Risk Factors Associated with the Five Leading Causes
of YPLL among U.S. Puerto Ricans**

Cause	Risk Factor(s)
HIV infection	Unprotected sex Illegal drug use
Homicide and legal intervention	Poverty Access to firearms Illegal drug use Alcohol abuse
Accidents	Illegal drug use Alcohol abuse Access to firearms Occupational hazards
Diseases of heart	Tobacco consumption Diet/activity patterns Stress
Malignant neoplasms	Tobacco consumption Diet/activity patterns Inadequate health screening

Source: Based on National Center for Health Statistics, Department of Health and Human Services, *Vital Statistics of the United States*, 1989, vol. 2, *Mortality*, DHHS Pub. No. (PHS) 92-1102 (Washington, D.C.: U.S. Government Printing Office, 1992).

The fact that many of the risk factors associated with premature death involve behavioral choices and are therefore amenable to modification should not lull us into thinking that change will be easy. As two researchers have concluded:

There can be no illusion about the difficulty of the challenges in changing the impact which [external] factors have on health status . . . Behavioral change is motivated not by knowledge alone, but by a supportive social environment and the availability of supportive services. Sexual behavior and illicit use of drugs take place behind closed doors and are difficult to confront directly even in a putatively open society.¹⁷

What happens behind U.S. Puerto Ricans' closed doors cannot be disassociated from what happens in the "mean streets," which Piri Thomas has so vividly described.¹⁸ The so-called new morbidities¹⁹ resulting from drugs, sex, violence, depression, and stress have had a differential impact on this community. By "giving simple statistical expression to the harsh reality of death at younger ages,"²⁰ the years of potential life lost indicator signals a population very much at risk. ♣

Notes

1. Paul H. Wise, "Confronting Racial Disparities in Infant Mortality: Reconciling Science and Politics," *American Journal of Preventive Medicine* Supplement to 9, 6 (November/December 1993), 7.
2. Office of the Surgeon General, U.S. Department of Health and Human Services, *Recommendations to the Surgeon General to Improve Hispanic/Latino Health* (June 1993): 12.
3. J.M. Romeder and J.R. McWhinnie, "Potential Years of Life Lost between the Ages of 1 and 70: An Indicator of Premature Mortality for Health Planning," *International Journal of Epidemiology* 6, (1977): 143-151.
4. Centers for Disease Control, "Premature Mortality in the United States: Public Health Issues in the Use of Years of Potential Life Lost," *Morbidity and Mortality Monthly Report* 35, supplement no. 2S (1986).
5. William Petty (1623-1687), a pioneer in vital statistics and economics, conceived of such a measure in his *Political Arithmetic* (1687). John M. Last, ed. *A Dictionary of Epidemiology* (New York: Oxford University Press, 1983), 81.
6. Centers for Disease Control, "Years of Potential Life Lost before Age 65 — United States, 1990 and 1991," *Morbidity and Mortality Weekly Report* 42 (1993): 251-253; Romeder and McWhinnie, "Years of Potential Life Lost," 143-151; E.D. Richter, "Potential-Years-of-Life-Lost from Motor Vehicle Crashes in Israel," *International Journal of Epidemiology* 8 (1979): 383-388; and Massimo Arca et al., "Years of Potential Life Lost (YPLL) before Age 65 in Italy," *American Journal of Public Health* 78 (1988): 1202-1205.
7. Last, *Dictionary*, 81.
8. Romeder and McWhinnie, "Potential Years of Life Lost," 144.
9. Centers for Disease Control, "Years of Potential Life Lost," 251-253; National Center for Health Statistics, Department of Health and Human Services, *Vital Statistics of the United States*, 1989, vol. 2, *Mortality*, DHSS Pub. no. (PHS) 92-1102 (Washington, D.C.: Government Printing Office, 1992).
10. C.J.L. Murray, "The Infant Mortality Rate, Life Expectancy at Birth, and a Linear Index of Mortality as Measures of General Health Status," *International Journal of Epidemiology* 17 (1988): 126.
11. Annette B. Ramírez de Arellano, "Años de Capacidad Potencial Perdidos: La Mortalidad en Puerto Rico, 1986," *Boletín de la Asociación Médica de Puerto Rico*, Diciembre 1989, 480-482.
12. Annette B. Ramírez de Arellano, "The Death Divide: Differentials in Premature Mortality by Gender in Puerto Rico," *Boletín de la Asociación Médica de Puerto Rico* 84 (Enero 1992): 11-14.
13. Annette B. Ramírez de Arellano, "Prioridades de Salud en Puerto Rico: Hacia un Refinamiento de los Instrumentos de Medición," *Boletín de la Asociación Médica de Puerto Rico* 71 (Abril 1979): 142-146; and Ramírez de Arellano, "The Death Divide."
14. Annette B. Ramírez de Arellano, "Diferenciales en Mortalidad Por Sexo en Puerto Rico," *Boletín de la Asociación Médica de Puerto Rico* 73 (Enero 1981): 13; and Ramírez de Arellano, "The Death Divide," 12.

15. Mark L. Rosenberg et al., "Violence: Homicide, Assault, and Suicide," in *Closing the Gap*, edited by Robert W. Ambler and H. Bruce Dull (New York: Oxford University Press, 1987), 172.
16. Mario A. Orlandi, "The Challenge of Evaluating Community-Based Prevention Programs: A Cross-Cultural Perspective," in *Cultural Competence for Evaluators*, ed. Mario A. Orlandi (Rockville, Md.: U.S. Department of Health and Human Services, 1992), 5.
17. J. Michael McGinnis and William H. Foege, "Actual Causes of Death in the United States," *Journal of the American Medical Association* 270 (1993): 2211.
18. Piri Thomas, *Down these Mean Streets* (New York: Knopf, 1967).
19. Joy G. Dryfoos, "Preventing Substance Abuse: Rethinking Strategies," *American Journal of Public Health* 83, no. 6 (June 1993): 793.
20. Romeder and McWhinnie, "Potential Years of Life Lost," 150.

“Research indicates that whether one examines income or wealth, individual occupation, education level, or residence in a poverty area, there is a direct link between health and socioeconomic status. Poor health is concentrated among those with lower incomes and education. Hispanic women especially are apt to be at greater risk owing to their higher poverty rates and lower educational levels and employment rates.”

— Janis Barry Figueroa

The Health Status and Lost Earnings of Hispanic and Non-Hispanic Women

Janis Barry Figueroa, Ph.D.

Based on data from the 1990 early release file of the Latino sample of the Panel Study of Income Dynamics (PSID), this article examines the loss of earnings suffered by disabled or health-limited Hispanic women workers. For comparative purposes, the author created an identical analysis based on a sample of black and white non-Hispanic women from the 1989 original-sample PSID. The research also considers the prevalence of poor health among Latinas to ascertain whether their lower labor-force participation, earnings, and number of hours worked can be associated with episodes of poor health. The empirical results show that Hispanic women are more likely to report health limitations than non-Hispanic women. After controlling for other factors that might affect labor-supply behavior, the findings indicate that health problems negatively affect labor-force participation, the market wage offer, and the number of hours that both Hispanic and non-Hispanic women are able to supply. Hispanic women with health problems were more likely to work in comparison with a similar group of non-Hispanic women, so the prevalence of poor health among the Hispanic sample is not useful in explaining their relatively lower participation rates. Nor does it seem that the lower earnings and hours worked by Latinas in poor health are the major cause for the greater frequency of poverty-level earnings among this sample. In fact, the causality may work in reverse: poverty increases the probability of being in poor health.

The 1990–1992 Latino file of the Panel Study of Income Dynamics (PSID) provides the research community with an opportunity to test a number of hypotheses about the social and economic environment of Hispanics in the United States. In anticipation of the release of the full complement of variables and documentation that will accompany the 1990 through 1992 longitudinal files, I present preliminary findings from the 1990 early release file of the Latino sample of the PSID on the loss of earnings suffered by Hispanic women workers who are disabled or health-limited. For comparative purposes, I created an identical analysis from a sample of black and white non-Hispanic women from the 1989 original-sample PSID.

Studies show that health status, labor-force participation, earnings capacity, and the choice or opportunity to work full or part time are all related.¹ In general, analyses of Hispanic health trends have been extremely limited because of documentation prob-

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lems,² and with few exceptions, have been avoided.³ Therefore, information is limited on the degree to which Hispanic women's recorded lower labor-force participation, earnings, and number of hours worked can be associated with the prevalence of poor health within this population.

Research indicates that whether one examines income or wealth, individual occupation, education level, or residence in a poverty area, there is a direct link between health and socioeconomic status. Poor health is concentrated among those with lower incomes and education. Hispanic women especially are apt to be at greater risk owing to their higher poverty rates and lower educational levels and employment rates. Substandard access to health care and private or public health insurance is also likely to increase health problems for Hispanics.

In 1991, Hispanic women had a labor-force participation rate of 51 percent as compared with a 57 percent rate for non-Hispanic women.⁴ Hispanic women are therefore more prone to be out of the labor force and working in the home. Since "housewives" have been found to report poor health more frequently, this could be contributing to high report rates found among Hispanic women. However, because of major differences in the labor-force participation rates and labor-market experiences of Cuban, Mexican, Puerto Rican, and other Hispanic women, one must be cautious in generalizing about Hispanic women as a group.⁵

In 1990, Hispanic women were employed in low-paying occupations, were overly represented in production occupations, and experienced higher unemployment rates than their non-Hispanic counterparts. Statistics indicate that Hispanics are significantly more likely to lack private or public health insurance coverage and that they have less access to preventive and primary health care than non-Hispanics.⁶ About two-thirds of working Hispanic females had private or public health insurance, compared with 87 percent of white and 81 percent of black working women. Hispanic working poor women were as likely as white women to be covered by Medicaid (about 27 percent covered), but less likely to be covered than black women (about 41 percent covered).⁷ Because of economic limitations and the uneven public and private health insurance coverage available, one would expect Hispanic women to report being in poor health more often. On the basis of previous research, one would also expect those in poorer health to be less likely to work and to earn less.⁸

A Model for Estimating Women's Labor Supply

I used the following model to estimate the impact of poor health on the labor supply of Hispanic and non-Hispanic female heads and wives/"wives." One major problem for researchers lies in establishing the amount of confidence to be placed in both self-reported and objective measures of health when they are applied to models of labor-force behavior.⁹

I developed two measures of health limitations. The first, HLTHDEF1 in Table 1, is self-reported and based on two survey questions. The PSID questioned health status in general and further inquired whether there was a physical or nervous condition that limited the type of work or the amount of work the individual could do. Individuals who reported their health at the time of the interview as fair or poor and said they had a work-limiting health problem were flagged as being in poor health. Despite the fact that subjective measures of health or disability have been found to be influenced by such factors as social class and existing or past participation in disability-related social

welfare programs, HLTHDEF1 was the preferred measure in the labor-supply estimations.¹⁰

A second measure, HLTHDEF2, grouped people who were in programs for which health disability was a criterion for eligibility (see Table 1). However, the second measure, while positively and significantly correlated with the first, contained a small percentage of the total sample in both cases and was not included in the regression analysis.¹¹

Data and Labor-Supply Variables

I took the data for the labor-supply analyses from the 1990 Panel Study of Income Dynamics/Latino Early Release File. That file employed a multistage probability sample design and was conceived to be nationally representative of Mexican-Americans, Puerto Ricans, and Cuban-Americans. For my study, I narrowed the Hispanic sample to include only Puerto Rican, Cuban, and Mexican women aged 18 to 60 who were not self-employed and who were either female family heads, married women (wives), or women who were part of a cohabiting couple ("wives"). I constructed the non-Hispanic sample similarly from the existing non-Hispanic population in the 1989 PSID file.

Women who work must earn enough so that they can use their money and time to purchase the inputs necessary for the production of health and other home goods. The amount of time spent out of work over the course of a year because of illness lowers the wage, which is conditional on productivity, which is related to one's health. Weekly fixed costs associated with transportation, labor and health care markets, as well as costs associated with paying for home production and day care services, are especially apt to make the labor-supply function for women discontinuous. Therefore, I used a reservation-wage/reservation-hours model that allows for this discontinuity in the labor-supply function.

In a single-period decision model such this, the decision to work and the number of hours and weeks that an individual works are the result of both supply and demand factors.¹² On the demand side in this specification, market wages (equation 1) are assumed to be given independently of hours and are determined by a semi-logearnings function that includes years of completed schooling, a proxy for potential labor-market experience and its square, residence in the South, urban residence, and a control for health status.¹³ These variables are defined in Table 1.

The first equation on the demand side shows

$$\ln(W_i) = X_{1i}b_1 + u_i \quad (1)$$

where $\ln(W_i)$ is the natural log of the wage offer available to individual i , and X_{1i} is a row vector of observed individual characteristics with the associated parameter vector b . The mean-zero random disturbance term u_i represents the effects of unobserved factors (e.g., motivation) on market wages and is assumed to be a normal variate with classical properties for all i .

On the supply side we have

$$\ln(W_{*i}) = X_{1i}c_* + X_{2i}d_* + u_{*i} \quad (2)$$

where $\ln(W_{*i})$ is the i th individual's reservation wage. Working women maximize their level of satisfaction by combining household production time with market goods and

Table 1

Variable Definitions

Mexican	= 1 if individual identified as Mexican; 0 otherwise
Puerto	= 1 if individual identified as Puerto Rican; 0 otherwise
Cuban	= 1 if individual identified as Cuban; 0 otherwise
White	= 1 if individual identified race as white; 0 otherwise
Black	= 1 if individual identified race as black; 0 otherwise
Other	= 1 if individual identified race as other; 0 otherwise
AnnHrs	= annual work hours reported for 1989 (1988 original PSID)
NuKid6	= number of children under age 6 at home
NuKid7	= number of children 6 to 17 years of age at home
GetsAFDC	= 1 if individual received positive amount of ADC/AFDC in 1989 (1988 original PSID); 0 otherwise
Medicaid	= 1 if individual reported being covered by Medicaid in 1990 (1989 original PSID); 0 otherwise
FamHlth	= 1 if individual lived with other family member(s) who were not in good health in 1990 (1989 original PSID); 0 otherwise
Health	= 1 if individual self-reported poor health and/or work limitation in 1990 (1989 original PSID); 0 otherwise
Age	= age of respondent in years at time of 1990 interview (1989 original PSID)
Exp	= a measure of potential job experience calculated as age-years of completed education — 6
SqExp	= exp squared
Educ	= actual years of completed education
North, South, Midwest, West	= 1 if individual resided in geographic location at time of interview; 0 otherwise
Urban	= 1 if individual resided in urban area at time of interview; 0 otherwise
SingMom	= 1 if individual was a female family head living with children under age 18; 0 otherwise
MarrMom	= 1 if individual was a wife/"wife" living with children under age 18; 0 otherwise
NotMom	= 1 if woman (either head or wife) did not live with children under age 18; 0 otherwise
Poverty	= a ratio of real total family income in 1989/the census poverty threshold value for 1989 (1988 for original PSID) coded to reflect the value in relation to the census poverty line
LnWage	= real value of natural logarithm of hourly wage rate in 1989 (1988 original PSID)
Employed	= 1 if individual had positive wage rate and annual hours; 0 otherwise
Exolnc	= real value of exogenous income reported in 1989 (1988 original PSID)

services. Therefore, the amount of labor supplied depends on the value of the reservation wage, which is a function of individual characteristics contained in X_{1i} , where c_* is the associated coefficient vector. Variables thought to influence the reservation wage include the health of the respondent, the level of exogenous income, the health of other household members, the number and ages of children living in the household, the head and motherhood status of the individual, region of residence, whether the individual lives in an urban area, and taste factors relating to time spent at home. These variables are contained in the row vector X_{2i} , and d_* is the associated coefficient vector. The random disturbance term u_{*i} refers to unobservable factors and is assumed to be a normal variate with classical properties for all i .

The expectation is that poor health should lower the value of the offered wage, making it more likely that a woman with health problems will not be employed.

The final supply equation in this model shows that the annual number of hours supplied is a discontinuous function of the market wage,¹⁴ where

$$H_i = \alpha \ln(W_i) + X_{1i}c + X_{2i}d + e_i \text{ for } \ln(W_i) > \ln(W_{*i}) \text{ and}$$

$$H_i = 0 \text{ for } \ln(W_i) \leq \ln(W_{*i}) \quad (3)^{15}$$

The expectation is that women with health problems generally work fewer hours annually.

Sample Characteristics

The preliminary findings contained in Table 2 show that Hispanic heads and wives fare worse in terms of the percentage employed, wage rates, annual hours worked, poverty threshold values, years of completed education, yearly labor income, and exogenous income. Hispanic women are more likely to receive public assistance, be covered by Medicaid, live with other family members who are in poor health, and report more health problems of their own.

Table 2

Variable Means (and Standard Deviations) for Total Population

Variable	Hispanic Female Heads Wives/"Wives"	Non-Hispanic Female Heads Wives/"Wives"
Mexican	.796 (.403)	White .847 (.360)
Puerto	.147 (.354)	Black .144 (.351)
Cuban	.057 (.232)	Other .021 (.145)
AnnHrs	914.5 (926)	1,327 (920)
Nukid6	.726 (.934)	.336 (.643)
NuKid7	1.21 (1.29)	.664 (.953)
GetsAFDC	.068 (.253)	.044 (.206)
Medicaid	.109 (.312)	.054 (.226)
FamHlth	.089 (.284)	.033 (.179)
Health	.415 (.493)	.270 (.444)
Age	36.9 (10.8)	38.3 (10.9)
Exp	18.9 (11.6)	19.2 (11.3)

Table 2, continued

Variable	Hispanic Female Heads Wives/"Wives"	Non-Hispanic Female Heads Wives/"Wives"
SqExp	490 (489)	495 (503)
Educ	8.57 (4.49)	12.9 (2.49)
North	.118 (.323)	.228 (.419)
Midwest	.119 (.324)	.257 (.437)
South	.237 (.426)	.333 (.472)
West	.525 (.500)	.177 (.381)
Urban	.401 (.490)	.741 (.438)
SingMom	.158 (.365)	.141 (.348)
MarrMom	.642 (.480)	.396 (.489)
NotMom	.200 (.400)	.463 (.499)
Poverty	3.93 (1.85)	5.43 (1.65)
LnWage	.892 (.865)	1.50 (.954)
Employed	.580 (.494)	.787 (.410)
ExoInc	16,980 (13,410)	25,200 (44,300)
n =	1,292	3,436

Table 3 provides estimates on the probability of self-reported health problems among the Hispanic and non-Hispanic women's sample. Among Hispanic women, a one-unit increase in the poverty threshold value significantly diminished probabilities of health problems by 6.2 percent. Coverage by Medicaid (an alternative indicator of low socioeconomic status) increased health limitation probabilities by 11.7 percent. A one-unit increase in education diminished health-problem probabilities by 1.3 percent. These findings support previous studies that document the inverse relationship between mea-

asures of health and indicators of socioeconomic status. They suggest the need for research that looks at the interaction between poor health and low income without assuming the direction of causality.¹⁶

Table 3

Coefficients of Probit Model for Labor Force Participation of Hispanic and Non-Hispanic Female Heads and Wives/"Wives" Aged 18 to 60

Dependent Variable = Employment Status (standard errors in parentheses)		
Variable	Hispanic	Non-Hispanic
f(Xb/r)+ Constant	.3094 -.493 (.294)	.2618 .643** (.274)
PuertoRic	-.138 (.231)	—
Mexican	-.127 (.178)	—
Black	—	-.135 (.201)
White	—	-.045 (.196)
Educ	.045** (.009)	.091** (.011)
Exp	.051** (.013)	.012 (.010)
SqExp	-.001** (.003E-01)	-.009 ^{E-01**} (.002E-01)
NotMom	.202 (.130)	.157 (.095)
SingleMom	.103 (.112)	-.003 (.087)
NuKid6	-.221** (.047)	-.438** (.050)
NuKid7	-.021 (.036)	-.115** (.039)
FamHlth	-.133 (.132)	-.103 (.133)
South	.378 (.203)	-.198** (.075)
West	.427* (.199)	-.209** (.085)
Midwest	.015 (.197)	-.309** (.076)
Urban	.314** (.079)	-.001 (.062)

Table 3, continued

Variable	Hispanic	Non-Hispanic
Exolnc	.002 ^{E-03} (.002E-03)	-.008 ^{E-03**} (.001E-03)
Health	-.221** (.079)	-.342** (.058)
Loglikelihood	792.21 n = 1,292	-1,531.6 3,436

Source: 1990 PSID/LNPS Early Release File and 1989 PSID. Data are weighted.

+ = Multiply coefficients by this factor to obtain slopes at variable means.

Significance Level: **<.01
*<.05

Among Hispanic women, a one-unit increase in age increased the probability of health deterioration by 1.3 percent as would be expected. A one-unit increase in the number of children 6 to 17 years of age decreased the probability of health problems by 4.8 percent, suggesting that the diminished time demands of older children may actually result in improved health. Alternatively, living with other family members who are ill increased health disability probabilities by a large 12.5 percent. This finding would corroborate the idea that women who are responsible for the well-being of others may themselves be in poor health owing to the related stress and increased money and time demands associated with caretaking. Holding other factors constant relative to married mothers, women who were not mothers and women who were single mothers were 12.6 and 21.9 percent less likely, respectively, to report health problems. This finding is at odds with Wolfe and Hill, who reported that married women enjoy better health than single women and that mothers have better health than nonmothers.¹⁷ This disparity in findings may reflect major differences in determining marital and maternal status between the Current Population Survey and the PSID.¹⁸

The determinants of health status among non-Hispanic women are shown in Table 3. Relative to women of other races (see Table 1 definitions), white women were 12.4 percent less likely to report health limitations, *ceteris paribus*. A one-unit increase in education decreased the probability of health problems by 1.8 percent, while age significantly increased the deterioration of health. The probabilities of health problems were 14.1 percent lower for single mothers relative to married mothers. Yet, *ceteris paribus*, a one-unit increase in the number of children under age 6 diminished poor health probabilities by 7.1 percent, indicating that the ages and number of children have implications for the health of mothers. Non-Hispanic women living with other family members in poor health were themselves 9.7 percent more likely to report health limitations. Medicaid coverage increased poor health probabilities by 9.7 percent, and a one-unit increase in the poverty threshold value diminished health problem probabilities by 3.8 percent. Of interest is the fact that among non-Hispanic women, annual work hours had a significant negative effect on poor health probabilities. Haveman, Stone, and Wolfe argued that this positive relationship between hours worked and good health, found in many single-equation models of the determinants of health status, disappears when the interdependencies of health, work time, and wages are accounted for.¹⁹ Therefore, this finding should be interpreted with caution.

Table 4

**Coefficients of LnWage Regression Model for Working Hispanic
Female Heads and Wives/"Wives" Aged 18 to 60**

Variable	Hispanic	Non-Hispanic
Constant	.959** (.162)	.331** (.083)
Experience	.178** (.007)	.018** (.003)
SqExp	-.03 ^{E-02} (.01 ^{E-02})	-.01 ^{E-02} * (.08 ^{E-03})
Educ	.047** (.005)	.099** (.005)
Health	-.109** (.042)	-.065** (.026)
South	-.165** (.042)	-.084** (.022)
Urban	-.004 (.043)	.187** (.024)
Lambda	.035 (.121)	-.186** (.065)
Adj R2	.16	.23
n =756		2,723

Source: 1990 LNPS/PSID Early Release File and 1989 PSID. Data are weighted.

Significance Level:**<.01
*<.05

To summarize, a one-unit increase in the poverty threshold value was more significant in decreasing the probability of poor health among the Hispanic sample relative to the non-Hispanic sample. Medicaid coverage was more likely to increase the probabilities of poor health for Hispanic women compared with non-Hispanic women. A one-unit increase in the level of education was more significant in diminishing the poor health probabilities of non-Hispanic women than of Hispanic women. These results indicate that group differences in the level of poverty, the quality of education, and publicly provided medical care are important distinctions that have major implications for Hispanic women's health. More research on the quality, not just the quantity, of health care and education obtained by Hispanic women could assist policymakers in targeting allocations to health care and labor markets.

Labor-supply Results

Table 4 presents the coefficients from the probit model of labor-force participation for Hispanic and non-Hispanic women, respectively. The partial derivative for each independent variable evaluated at the sample means can be obtained by multiplying each coefficient by the constant of proportionalities, given in the first row of Table 4.

Hispanic women with health problems are 6.8 percent less likely to participate in the labor force. The number of children under age 6, the level of education, the amount of labor-market experience, and regional and urban location also had the expected effect on work probabilities.

Table 4 shows that among non-Hispanic women, health limitations diminished participation probabilities by 8.9 percent. It is important to note that while Hispanic women were more likely to report being in poor health, those with health limitations in that sample had higher participation probabilities than those with health limitations in the non-Hispanic women's sample. Thus, while poor health had the expected negative effect on participation for both groups, health status per se does not help to explain the relatively lower labor-force participation rates of Hispanic women.

Table 5 provides the lnwage regression estimates. Among Hispanic women, poor health had, at $<.01$, one-tailed test, a significant impact on diminishing hourly wages. Specifically, the average real wage, in 1984 dollars, for working Hispanic women was \$4.65 ($\lnwage = 1.538$). Using the coefficients from the lnwage regression, I calculated the average wage for women with no health limitations to be \$4.84 ($\lnwage = 1.577$), and the average wage among women with health problems to be \$4.34 ($\lnwage = 1.488$). Unhealthy Hispanic women earned on average 10 percent less than their healthy counterparts.

It would be useful to calculate the productivity losses associated with poor health among these workers using the methods developed in Havemen et al.²⁰ The loss of capability to earn attributable to health limitations among working Americans is shown to be associated with productivity losses, which in the aggregate constituted a loss equal to 4.5 percent of the gross national product in 1988. With the release of the 1990–1992 longitudinal Latino PSID file, the concept of potential productivity losses, which result when flows from the stock of human capital are reduced because of widespread disability or health limitations, can be calculated and the findings for Latinos compared with other racial/ethnic subpopulations.

Havemen et al. also constructed estimates of actual earnings capacity which assumed full-time, full-year work (2,000 hours), and they made adjustments for involuntary unemployment and reported weeks of work missed due to disability.²¹ However, while this is the preferred methodology, the PSID early-release data contain neither unemployment data nor information on the number of weeks in the year that individuals are unable to work due to a health limitation or disability. Without these controls, the comparisons I made between the actual earnings of women with and without health limitations would reflect women's individual preferences, unrelated to health, for part-time and full-time work. This is because the decrease in the amount of time spent in market work is the result of both the direct effect of the health limitation and the indirect effect on work time that stems from the wage change. Future studies using the complete panel data could avoid this problem.

Table 5 shows that the real average wage (in 1984 dollars) for all non-Hispanic women was considerably higher, at \$6.74 ($\lnwage = 1.908$). Among women with no health problems, the average wage was \$6.84 ($\lnwage = 1.923$), and among women with health limitations, the wage averaged \$5.58 ($\lnwage = 1.719$). Non-Hispanic women with health limitations earned about 18 percent less than their healthy counterparts.

The findings show that Hispanic women with health problems worked 139 hours less in 1989. The hours coefficients indicate that for non-Hispanic women, health problems caused a loss of 107 hours annually. Using the hours and wage regression results to

Table 5

**Estimates of Annual Hours and Weeks, Conditional on the Labor-Force
Participation of Hispanic and Non-Hispanic
Female Heads and Wives/"Wives" Aged 18 to 60**
(standard errors in parentheses)

Variable	Annual Hours Hispanic	Annual Hours Non-Hispanic
One	851.7 (401) (461)	1,497** (401) (156)
PuertoRic	-25.3 (148)	—
Mexican	-246* (109)	—
Black	—	106 (99.9)
White	—	161 (97.2)
PredWage	388* (188)	92.9 (58.5)
NotMom	-117 (78.2)	37.4 (47.0)
SingleMom	-153* (73.6)	142** (43.2)
NuKid6	-85.5* (37.5)	-195** (31.2)
NuKid7	-17.7 (23.3)	-77.4** (20.8)
FamHlth	-158 (97.1)	-131 (77.1)
South	336* (153)	110** (35.3)
West	419** (146)	118** (39.5)
Midwest	545** (143)	35.8 (37.8)
Urban	91.7 (64.2)	48.3 (32.1)
Exoglnc	.002E-01 (.001)	-.004** (.006E-01)
Health	-139** (56.8)	-106** (34.5)

Table 5 continued

Variable	Annual Hours Hispanic	Annual Hours Non-Hispanic
Lambda	147 (202)	-224* (97.7)
R2 =	.05	.11
n =	756	2,723

Source: 1990 LNPS/PSID Early Release File and 1989 PSID. Data are weighted.

Significance Level = **<.01
*<.05

compute the conditional earnings of those women with and without health limitations,²² I found that for the average Hispanic women with no health problems, earnings would equal \$8,266 annually (1,708 hours @ \$4.84/hour). Actual earnings for women with health problems would equal \$6,197 (1,428 hours @ \$4.34/hour). Average earnings for the total sample of working women would equal \$7,291 (1,568 hours @ \$4.65/hour). Thus, working Hispanic women with health problems realize earnings that are about 88 percent of those of their healthy counterparts.

Taking into account the difference in hours worked and hourly wage rates among non-Hispanic women with and without health problems, the calculated gap in actual earning capacity was quite large. The earnings of an average woman with no health problems was \$12,195 (1,783 hours @ \$6.84/hour). The earnings for women with health problems was \$8,755 (1,569 hours @ \$5.58/hour) and averaged about \$11,296 (1,676 hours @ \$6.74/hour) for the entire sample of non-Hispanic working women. Thus, working non-Hispanic women with health problems had only 72 percent of the earnings of women without these limitations.

The evidence presented here shows that Hispanic women are more likely to report health limitations than non-Hispanic women. After controlling for other factors that might affect labor-supply behavior, the results indicate that health problems negatively affect labor-force participation, the market wage offer, and the number of hours that both Hispanic and non-Hispanic women are able to supply. Hispanic women with health problems were more likely to work than a similar group of non-Hispanic women, so the prevalence of poor health among the Hispanic sample is not useful in explaining the latter's relatively lower participation rates. Nor does it seem that the lower earnings and hours worked by Latinas in poor health are the cause for the greater frequency of poverty-level earnings among this sample. Although poor health certainly contributes to lowering the earnings and hours worked by Latinas with health problems, the actual earnings of those with health limitations are only 12 percent less than the earnings of their healthy counterparts. Among non-Hispanic women with health problems, actual earnings were 28 percent less than those of their healthy counterparts.

The empirical results indicate that the smaller earnings gap within the Hispanic women's sample is largely the result of less variation in the wage earned by women with and without health limitations. Employers are differentially rewarding or penalizing human capital and productivity-related factors (e.g., education and health) in determining wage offers made to Hispanic and non-Hispanic women. Of course these differentials may be a function of occupation or industry location, as well as union member-

ship, which were not controlled for in the empirical tests. More generally, employment discrimination, both in terms of wages and occupational placement, may "set" lower wage and hour constraints so that the average earning capacity for Hispanic women is established within a given range, regardless of whether an individual woman is more or less in good health.

Even if Hispanic women with health problems were to enjoy the earnings of their healthy counterparts, their income would still place them in poverty unless they receive help from family members or public programs. Thus, while improving the health status of Latinas will increase their participation rates, earned wages, and the number of hours worked, it will not resolve the problems of poverty and low annual income. For Hispanic working women, being in good health does not guarantee that their chances of escaping poverty will be significantly improved, while indicators of low socioeconomic status greatly increase their probabilities of reporting being in poor health. ■

Notes

1. B. Wolf and S. Hill, "The Role of Health in Limiting Earnings Capacity, Poverty, and Welfare Participation," in *Poverty and Prosperity in the USA in the Late Twentieth Century*, edited by D. Papadimitriou and E. Wolfe (New York: Macmillan, 1993).
2. National Center for Health Statistics, *Health, United States, 1990* (Hyattsville, Md.: U.S. Public Health Service, 1991).
3. Council on Scientific Affairs, "Hispanic Health in the United States," *Journal of the American Medical Association* 265, no. 2 (1991): 248–252.
4. U.S. Bureau of the Census, *The Hispanic Population in the United States: March 1991*, U.S. Department of Commerce, Current Population Reports, Series P-20, No. 455 (Washington, D.C.: U.S. Government Printing Office, 1991).
5. F. Bean and M. Tienda, *The Hispanic Population of the United States* (New York: Russell Sage, 1987), and E. Meléndez, C. Rodriguez, and J. Barry Figueroa, *Hispanics in the Labor Force: Issues and Policies* (New York: Plenum, 1991).
6. Council on Scientific Affairs, "Hispanic Health in the United States," and General Accounting Office, *Hispanic Access to Health Care: Significant Gaps Exist* (Washington, D.C., 1992).
7. National Council of La Raza, *Hispanics and Health Insurance, Volume 1: Status*, 1992.
8. N. Chirikos, "Economic Determinants and Consequences of Self-Reported Work Disability," *Journal of Health Economics* 3, no. 2 (1984): 117–136, and Wolfe and Hill, "The Role of Health in Limiting Earnings Capacity."
9. J. Bound, "Self-Reported versus Objective Measures of Health in Retirement Models," *Journal of Human Resources* 26 (1991): 106–138, and R. Haveman and B. Wolfe, *Disability Status as an Unobservable: Estimates from a Structural Model*, Institute for Research on Poverty Discussion Paper 775-85, University of Wisconsin, 1985.
10. Haveman and Wolfe, *Disability Status as an Unobservable*.
11. R. Haveman, B. Wolfe, L. Buron, and S. Hill, in *The Loss of Earnings Capability from Disability/Health Limitations: Toward a New Social Indicator*, Institute for Research on Poverty Discussion Papers, Dp# 1016-93, 1993, review a number of alternatives for defining

the population of persons with health problems or disabilities, including work limitations and disability program participation criteria found in the CPS and other data sets.

12. Legal constraints and employer stipulations concerning the number of hours per week and weeks per year that must be worked are relaxed in the model.
13. Most empirical labor-market analysis assumes that wages are unaffected by hours of work. In a test for differences in the wages of part-time and full-time women workers, R. Blank ("Are Part-time Jobs Bad Jobs?" in Gary Burtless, ed., *A Future of Lousy Jobs?* [Washington, D.C.: Brookings Institution, 1990], 144), concluded that "there is no simple way to characterize the effects of part-time work on women's wages." Without more research, it seems reasonable to keep the identifying assumption I used here.
14. The relationship between equations 2 and 3 arises from the fact that since reservation wage W_{*i} equals the greatest wage offer consistent with zero hours of labor supply, then $c_* = -c/a$, $d_* = -d/a$, and $u_{*i} = -e/a$.
15. The first-stage probit estimates used the entire sample of working and nonworking women to establish the probability of being in the employed sample. See Table 1 for the definitions of variables included in the maximum likelihood estimations. I used the coefficient estimates from the probit to form a measure of the "selection-bias" variable λ for each observation. The second-stage estimates of the wage function for workers contained the set of regressors included in the vector X_1 , but no right-hand-side endogenous variables. In order to correct for the simultaneous equation bias of the OLS estimator, I used imputed wages obtained from the selection-bias corrected regression as an instrument for actual wages in the estimation of the annual-hours equations. I then estimated the parameters of the annual-hours equations, again correcting for the possibility of selectivity bias by including the λ variable in the equations. Despite the unidirectional dependency between the endogenous variables in equation 3, the system is not recursive because of the assumed correlation between the disturbances in the market wage and annual-hours-worked equations.
16. J. Feinstein, "The Relationship between Socioeconomic Status and Health: A Review of the Literature," *Milbank Quarterly* 71, no. 2: (1993): 279-322, and H. S. Luft, *Poverty and Health: Economic Causes and Consequences of Health Problems* (Cambridge Mass.: Ballinger, 1978).
17. Wolfe and Hill, "The Role of Health in Limiting Earnings Capacity."
18. See M. S. Hill, *The Panel Study of Income Dynamics: A User's Guide* (Newbury Park, Calif.: Sage, 1992).
19. R. Haveman, M. Stone, and B. Wolfe, "Market Work, Wages, and Men's Health," NBER Working Paper No. 3020, 1989.
20. Havemen et al., *The Loss of Earnings Capability*.
21. Ibid.
22. To obtain the potential wage, I used coefficients from the appropriate log wage ($\ln wage$) equation, including the person's health, demographic, and human capital characteristics. I included the coefficient on the λ variable from the wage regression in predicting wages, so that the resulting earnings loss estimates are conditional on whether we observed the individual working. Lost earnings measures the difference between the amount of money persons could potentially earn if they were free of disability/health limitations and the amount of money that they can actually earn given their limitations.

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